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**CONTENTS**

	PAGE
Editorial Notes .....	645
British Transport Commission Traffic .....	647
British Railways Financial Results .....	647
Transport Statistics .....	647
Importance of Corrosion Research .....	648
South African Railways & Harbours .....	648
Flat-Bottom Track .....	649
Letters to the Editor .....	650
Overseas Railway Affairs .....	653
The Design of Locomotive Axleboxes .....	654
Improving Piccadilly Line Signalling .....	658
Traffic Conditions in Austria .....	659
Inauguration of the Northern Transandine Railway .....	660
British Railways Experimental Liveries .....	662
Personal .....	663
Institution of Locomotive Engineers' Annual Luncheon .....	665
Inter-Railway First-Aid Competition .....	666
Southern Region "Thanet Belle" Inaugurated .....	667
Associated Electrical Industries Limited .....	668
Questions in Parliament .....	668
Notes and News .....	669
Official Notices .....	671
Stock Market and Table .....	672

**DIESEL RAILWAY TRACTION**

The June issue of this RAILWAY GAZETTE publication, illustrating and describing developments in Diesel Railway Traction, is now ready, price 2s.

## Transport Administration in Tropical Dependencies

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**THE RAILWAY GAZETTE**

33, TOTHILL STREET, WESTMINSTER, S.W.1

**The "New Look" in Transport**

WHEN the President of the Railway Clerks' Association, Mr. Percy Morris, presided at the annual conference of the Association this week at Dunoon, he made some realistic references to what he called the "new look" in transport. He recognised that it would require at least three to five years before any substantial benefit could be expected from nationalisation, and recognised that the change of ownership constituted a challenge to the trade unions. It was the outcome of a workers' policy; it was the workers who were on trial, and he believed that the success of nationalisation would depend on their response, not only in transport, but in all nationalised industries. Nationalisation could be justified only if it gave more efficient transport at the lowest possible cost. Mr. Morris assured the British Transport Commission and the Railway Executive of the willingness of the Railway Clerks' Association to co-operate in forwarding the plans of the Commission, and he added that it had already promised full co-operation to the Railway Executive, which had asked for its help in dealing with losses from breakages, pilferage and so forth, in respect of which last year the railway authorities had paid out £2,600,000.

**British Railway Investments in Uruguay**

Statistics compiled by our contemporary, the *South American Journal*, show that the total British investment in Uruguay at the end of 1947 amounted to £43,567,620. The amount received in interest was £1,417,737, or 3·2 per cent., which was a substantial improvement on the £1,332,875 or 3 per cent. for the previous year. The total amount receiving no interest last year, however, was £17,293,341, compared with £15,943,341 for 1946. The absence in 1947 of any distribution on either the debenture or share capital of the Central Uruguay Railway compared with full rate paid in the previous year on the 4½ per cent. first debenture stock, has led to a heavy reduction on the return on the railway group which has been very poorly remunerated since 1930. As a result, on the £14,562,147 of British capital invested in Uruguayan railways last year, only £13,359, or less than 0·1 per cent., was received, and no less than £14,293,341 was unremunerated. In 1946 the amount of interest received was £76,731, equal to 0·7 per cent., and the amount on which no interest was forthcoming totalled £12,943,341.

**Institution of Locomotive Engineers' Annual Luncheon**

The annual luncheon of the Institution of Locomotive Engineers, which was held last week, was no exception to the tradition which has been established of providing an occasion for meeting by a very large number of those directly, or indirectly, associated with this branch of engineering. As has become customary, indeed, the members and their guests represented association with railways in many parts of the world. Elsewhere in this issue we give a summary of the speeches by the President, Mr. Julian S. Tritton, who was in the chair, Mr. Harold Rudgard, President Elect, Sir John Calder, the Senior Crown Agent for the Colonies, who was the principal guest, and Mr. V. M. Barrington-Ward, member of the Railway Executive, who proposed the toast of the Institution. All the speakers were commendably brief and apposite. In view of the very close associations which members of the Institution have had for so long with the Crown Colonies and the important part which railways have played in the development of those territories, the choice of the Senior Crown Agent for the Colonies as the principal guest was a happy one.

**British Railways Officers' Guild**

Mr. L. F. Rowlandson, Master of the British Railways Officers' Guild, in his report presented at the Guild's third annual general meeting, to which further reference is made elsewhere in this issue, points out that although over 50 per cent. of those eligible have now joined the Guild, there is scope for members to assist in further recruiting. Dealing with the salaries of railway officers and the higher administrative and technical staffs, the Master states that it has not yet been possible to obtain any assurance from the Railway Executive

that the unsatisfactory position, aggravated by the recent advances to the lower-rated staff, will be met adequately and adjusted retrospectively. Reference is also made to the apparent disinclination of the British Transport Commission to reach agreement with the Guild concerning the establishment of machinery for the settlement by negotiation of terms and conditions of employment. To enable officers of certain road transport firms to join the Guild, and to meet the cases of dock, canal, and hotel personnel who come under the jurisdiction of Executives other than the Railway Executive, it is being proposed that its name be altered to the British Transport Officers' Guild. If the Transport Commission agrees, the report states, to adequate machinery for negotiation in accordance with the Transport Act, it is proposed to go forward with an application for a charter under that new title; but, if not, the basis of the association may require reconsideration.

#### Southern Region's New "Belle"

The fourth of the all-Pullman "Belle" trains in service on the Southern Region made its first run on May 31, the first day of the summer train service. This is the "Thanet Belle" which runs daily between Victoria Station, London, and Ramsgate, calling at Whitstable, Herne Bay, Margate, and Broadstairs. The other three all-Pullman trains are the Brighton, Bournemouth, and Devon "Belles." The popularity of these all-Pullman trains is evident from the heavy advance booking for each of them, which shows the preference of the public for trains with advance booking facilities. From a railway point of view there is also good reason for the restoration of this facility on as wide a basis as possible as soon as practicable, because of the assistance it affords in keeping stations clear of unduly large crowds and queues. The institution of the "Thanet Belle," like the three similar trains, is a tribute to the enterprise displayed by the Southern Region, for matters of this kind are the result of regional initiative. The "Thanet Belle" was in the Southern Railway programme last year, but its introduction was deferred because of lack of suitable stock. We understand that when, this year, it was referred to the Railway Executive by the Southern Region, the reply was that matters of this kind rested with the Region. The considerable use which the Southern Region is making of Pullman rolling stock is serving to alleviate to some extent the shortage of main-line coaches at a time when holiday traffic is at its heaviest.

#### The New Route Across the Andes

Earlier this year the Governments of Argentina and Chile completed their respective portions of a new railway linking the two countries by way of the Socompa Pass in the Andes, and an official inauguration ceremony took place at Socompa on February 20. On the Argentine side of the frontier the new line, described on another page, runs for 355 miles from Salta to Socompa through mountainous country that reaches its highest point at Abra Chorrillos, 14,682 ft. above sea level. In Chile new construction was necessary from Socompa to Augusta Victoria (112½ miles), whence the route to Antofagasta is completed over the Antofagasta (Chili) & Bolivia Railway. The whole distance from Salta to Antofagasta is 560 miles, and the railway is metre gauge. By the opening of the new line the Antofagasta (Chili) & Bolivia Railway provides the final link in two routes across the Andes from Argentina, since there is already a through international service between La Paz and Buenos Aires which leaves the company's metals at Atocha and proceeds to the frontier at Villazon over the Bolivian Government Railway, after which the Argentine State Railways take the train on *via Jujuy* and Tucuman. Salta, on the new Transandine line, is on a branch from this route at Güemes.

#### British Railways Track Renewals in 1948

Estimates early in the year of the extent to which permanent way renewal would be possible on British Railways in 1948 appeared to be cautious, and from a statement just issued by the Railway Executive it seems clear that the figure of 600 miles given by Sir Eustace Missenden (see our February 20 issue) referred to route-miles and not track-miles. The latest announcement says that 1,226 miles of track will be renewed

completely this year, together with partial renewal of a further 550 miles. These figures accord better with what is permitted by the allocation of 250,000 tons of steel for permanent way purposes which was announced in the Government's "Economic Survey for 1948." Commenting on this figure in our March 26 issue, we estimated that it would suffice for the renewal of 1,600 miles of track. In a statement on the current programme, the Railway Executive looks forward to a raising of temporary speed restrictions, with beneficial results to the timekeeping of trains, and expects confidently that it will be possible to complete the whole of the estimated mileage programme during the year. Economic conditions, it is said, will not allow some of the arrears of maintenance accumulated during the war to be overtaken as had been hoped.

#### Reconstruction at Dunkirk

It was particularly appropriate that the visit of the Permanent Way Institution to Dunkirk, on May 29, should have coincided with the eighth anniversary of the evacuation of the British and French forces. The visitors were the guests of the S.N.C.F., and a full day's programme included a tour of the docks, and visits to places of railway interest. The port installation suffered severely during the war years, and by the time France was liberated, the greater part of the docks had been destroyed, and the remainder was unusable. Reconstruction was begun almost at once, and by August, 1946, ships of light tonnage could pass through the Guillaum Lock. Fourteen months later a second lock was repaired, and larger ships were able to reach the quays. The train ferry between Dover and Dunkirk was reinstated on November 29, 1947, for goods traffic, and for passengers a fortnight later. Much still remains to be done, but the port is already dealing with half its pre-war monthly tonnage. The railways serving the docks have been repaired, and are now capable of dealing with a far greater tonnage.

#### Visual "Right Away" for French Railways

A visual signal instead of the pocket whistle is to be used for starting trains in France. The French National Railways have decided that a visual signal is better than an audible one. The whistle would be satisfactory if the signal were given always within easy earshot of the engine driver, but he may be misled by a whistle on an adjoining platform or elsewhere in the yard, resulting in his starting before it is intended he should do so. In future the signal will be given at night by a green light, the lantern used being masked until a button is pressed. For day working a device has been adopted which takes the form of a rectangle with a central green strip on a white ground. The two halves of the rectangle are hinged on the shaft of a flag, and the backs are coloured red. Folded, it looks like a red flag, which may be used in shunting work. Held in the hand to give the starting signal, the rectangle is opened by pressing a button or trigger with the thumb. The green strip then appears vertical and clearly visible on the white ground. This signal has been in service throughout the South-Eastern and Mediterranean Regions since May 9, and, according to the staff journal *Notre Métier*, will come into use in all the other regions from June 7 as fast as it can be supplied.

#### An Interesting Swiss Locomotive Repair

The Swiss Federal Railways carried out in 1947 an unusual repair to a four-cylinder compound 2-10-0 locomotive, which had developed a serious longitudinal crack along the bottom of the left-hand high-pressure cylinder. In this design, the high-pressure cylinders are located between the frames, and it was hoped to avoid the removal of the cylinder casting. Repeated attempts to cut out the metal around the crack, and to build up the material by electric welding, had failed, despite the different types of electrodes which were tried. Finally, it was decided to apply a thin steel plate below the cylinder barrel, so as to give mechanical strength, and to insert a specially cast and machined liner in the cylinder. The steel strengthening plate was held in position by sixteen ¾-in. studs, and a thin copper joint was interposed between it and the main casting, to ensure steam-tightness. The cylinder was then bored out slightly smaller than the liner, and was heated by

a burner to increase its internal diameter, while the liner was cooled by immersion in icy water at a temperature of about 1° C. The difference in the two diameters, at atmospheric temperature, was 0.2 mm., an amount which was determined from calculations, in the absence of any previous experience in this direction. The liner was covered with tallow and was drawn into place by a large screwed bar carrying a nut, which applied pressure to a round plate bearing against the outer edge of the liner. A saving of about 10,000 Swiss francs was effected by so avoiding the replacement of the cylinder casting.

### British Transport Commission Traffics

THE traffic receipts of the British Transport Commission during the four weeks to May 16 continued to increase. They covered the Whitsun holiday up to, but not including, the Monday bank holiday, and in aggregate were £30,277,000, or £3,275,000 more than for the corresponding period a year earlier. The rate of increase of the total traffic has shown some shrinkage recently, as will be apparent from the following figures:—

Four weeks ended, 1947	Total traffics	Increase on 1947
£	£	Per cent.
January 25 ...	27,943,000	3,172,000 13.3
February 22 ...	28,664,000	7,437,000 35.0
March 21 ...	29,258,000	7,356,000 33.6
April 18 ...	30,107,000	3,883,000 14.8
May 16 ...	30,277,000	3,375,000 12.5

In the latest four-weekly period British Railways receipts totalled £25,596,000, an increase of £3,053,000. The greatest advance in revenue was from passengers, which at £9,456,000 was up by £1,482,000. London Transport revenue, at £4,553,000, shows an increase of £312,000, and revenue from Inland Waterways was £10,000 better at £128,000. In the table given below the various divisions of traffics are given for the four weeks to May 16, and also the figures for the year to that date, as compared with a similar period 12 months earlier.

	Four weeks to May 16		Incr. or decr.	Aggregate to May 16		Incr. or decr.
	1948	1947*		1948	1947*	
	£000	£000	£000	£000	£000	£000
British Railways (receipts from railway working)						
Passengers ...	9,456	7,974	+1,482	41,793	36,905	+4,888
Parcels, etc., by passenger train ...	2,240	1,967	+273	10,754	9,409	+1,345
Merchandise (other than Classes 1-6) and livestock ...	6,563	6,284	+279	34,274	26,365	+7,909
Minerals & merchandise (Classes 1-6) ...	2,285	1,785	+500	11,130	7,271	+3,859
Coal & coke ...	5,052	4,533	+519	25,881	20,578	+5,303
	25,596	22,543	+3,053	123,832	100,528	+23,304
London Transport—						
Railways ...	1,129	1,039	+90	5,598	4,960	+638
Buses & coaches ...	2,526	2,342	+184	11,885	10,252	+1,633
Trolleybuses & trams ...	898	860	+38	4,292	3,783	+509
	4,553	4,241	+312	21,775	18,995	+2,780
Inland Waterways—						
Tolls ...	56	49	+7	272	194	+78
Freight charges, etc. ...	72	69	+3	370	309	+61
	128	118	+10	642	503	+139
Total...	30,277	26,902	+3,375	146,249	120,026	+26,223

\* The comparison of 1948 with 1947 is affected by increases in fares, rates, and charges, which were introduced at different dates during the year 1947 to meet increases in operating costs.

For the 20 weeks of the current year total traffic receipts at £146,249,000 are higher by £26,223,000. Receipts from railway working total £123,832,000, an increase of £23,304,000; the greatest advance has been in the case of merchandise and livestock revenue, which at £34,274,000 shows a gain amounting to £7,909,000.

A direct comparison of 1948 figures with 1947 is not possible because of the increases in charges which were introduced last year. Moreover, the gross traffic receipts give no guide to the net revenue position, which is largely affected by an increased level of costs.

### British Railways Financial Results

IN several recent articles we have pointed out the need for publishing an estimate of expenditure along with the four-weekly statement of railway receipts. The British Transport Commission maintains that it would not be practicable to give currently an analysis of financial results. In the days of the old companies, estimates of net revenue were prepared for the directors, one of whose main functions was to scrutinise the balance between earning and spending month by month and to see what was the company's cash position. The question of publishing expenditure figures was considered repeatedly, but the companies feared that, if their net revenues were known, unwise speculation on the Stock Exchange would be encouraged.

Probably the directors' fears were exaggerated, and clearly can be disregarded under existing conditions. *The Times*, as well as *The Railway Gazette*, has drawn attention to the custom of publishing net revenue figures in America and elsewhere. For example, at the beginning of May it was known that the estimated net income of the U.S.A. Class I railways for the month of March was \$25,200,000, as compared with \$46,200,000 for March, 1947. The operating ratio this year was 80 per cent, compared with 76 per cent, a year ago.

These figures are of first class importance at a time when railway staff are agitating for higher pay and the public want charges to be kept as low as possible. Both parties have the facts of the railway situation before their eyes. For the British Railways all we have are statements of traffic receipts showing large increases this year compared with 1947, which may convey quite a wrong impression of the net financial results. We trust that the Commission will take steps to clear the air.

### Transport Statistics

ON May 21 we reviewed No. 1 of the four-weekly *Transport Statistics*, published by the British Transport Commission, and commented on the omission of a table of wagon loadings. Five days later we received, through the courtesy of the Librarian, Bureau of Railway Economics, Washington, D.C., a bulletin issued by the Car Service Division, Association of American Railroads. This bulletin, which appears about the 20th of each month and consists of four closely printed pages, bears the resounding title of *The National Transportation Situation*, but justifies its name as it summarises the salient features of current traffic movements and outlines the prospective demands for wagons in the near future.

The basis of this instructive broadsheet is the weekly record of revenue freight wagon loadings. Figures are given of the forwardings during the week ended May 8, and for the first 19 weeks of this year ended on the same date, under the eight headings of grain, livestock, coal, coke, forest products, ore, merchandise in less than wagon loads and miscellaneous. The loadings show a decrease of nearly 6 per cent. on the corresponding period of 1947, spread over all commodities except ore, which was up 17 per cent. America has an insatiable demand for steel and several plants on Lake Erie for handling ore have been extended recently. Two ore machines of modern design can discharge a lake steamer at the rate of 30 tons a minute, and a record tonnage of imported ore is arriving at North Atlantic ports, so that the railways are critically short of open wagons suitable for rough traffics.

The railways were faced at the end of May with the problem of building up a supply of covered wagons for the conveyance of the winter wheat crop, which is expected to be the third largest in history. There was also a shortage of ventilated box wagons for carrying watermelons from the southeast, where the crop was heavier than expected; the situation was relieved by pressing livestock cars into service. The demand for refrigerator wagons is also brisk, the production of fresh fruit and vegetables being about 2 per cent. larger than in 1947.

The bulletin gives up-to-date particulars of wagon stock. On May 1 the railways owned 1,742,603 ordinary wagons, of which 82,705, or 4.7 per cent., were awaiting repairs. The serviceable stock was nearly 4,000 fewer than in May, 1947. In April, however, the railways installed 8,934 new wagons and scrapped 5,813. During the first four months of the year,



31,704 wagons were put into traffic and 18,070 withdrawn. At this rate of progress, the rolling stock position should be strengthened soon, as the new wagons are superior in capacity and equipment to the old vehicles.

This crisp bulletin, signed by W. C. Kendall, Head of the Car Service Division, tells the American people frankly all that most of them will wish to know about railway freight developments from month to month. In the course of carrying out his exacting duty of controlling wagon supply over 220,000 miles of railway, Mr. Kendall is performing public relations work of the highest order. Probably work of that class can be done only by a man who is master of his subject and has the gift of exposition. It shows up the poverty of the present arrangements for circulating worthwhile information about British Railways and our other types of transport.

### Importance of Corrosion Research

WHILE the fight against corrosion of iron and steel is as vital to the national economy as the campaign for the recovery of scrap, this is not a subject which arouses much enthusiasm among the public, though somewhat startling figures have been produced showing the material and financial wastage due to the rusting of metals. Timely publicity was given to the subject by the British Iron & Steel Research Association at a conference held in Birmingham on May 11 to discuss the work of its Corrosion Committee. This body, of which Professor G. Wesley Austin, O.B.E., is Chairman, includes among its members both academic scientists and men with practical industrial experience, and for some time it has conducted tests on the comparative resistance of iron and steel to corrosion and on the efficiencies of protective schemes for ferrous metals in different media.

At the Birmingham conference, Dr. J. C. Hudson, Head of the Corrosion Laboratory of the B.I.S.R.A., summarised the work so far accomplished, and referred also to the research undertaken by Dr. U. R. Evans at Cambridge University and by Dr. W. H. J. Vernon, O.B.E., at the Chemical Research Laboratory, Teddington, on the development of so-called cementiferous paints and the design of the rotor test for the corrosion of metals in sea water. The Atmospheric Corrosion Sub-Committee, under the Chairmanship of Mr. T. H. Turner, Chief Chemist & Metallurgist of the Eastern and North Eastern Regions, British Railways, has shown that the life of ordinary structural steel exposed to the atmosphere without a protective coating may be increased threefold by the addition to the steel of small quantities of alloying elements such as copper and chromium, without any undue increase in cost in relation to the improved performance.

The Protective Coatings Sub-Committee, under the Chairmanship of Mr. T. M. Herbert, Scientific Research Manager, London Midland Region, has conducted researches which have added materially to the knowledge of many types of protective coatings for iron and steel, more especially of painting schemes, and of metallic coatings for protection against atmospheric corrosion. Mr. Herbert also contributed to the discussion, dealing, first, with methods of pre-treating iron and steel surfaces prior to painting. This research was conducted largely in the Paint Research Laboratory of the former L.M.S.R. at Derby under Mr. F. Fancutt. Results obtained were embodied in a brochure first issued in 1941 and now to be revised and reprinted. It is unfortunate that in some respects the treatment advised is so simple that it is often ignored in practice.

Careful and thorough pre-treatment is half the battle in the preservation of steel by means of paint, and the other half lies in the paint itself. In the latter connection developments in the ranges of media and inhibitive pigments available for the preparation of priming paints have influenced research very considerably. Interim details of the work accomplished have recently been made known.\* Twelve different pigments have been under investigation, and care has been taken to ensure that all the paints are prepared under conditions as near as possible to large-scale production. Tests will not reach the first stage of completion until later this year. After six months,

however, certain interim observations were made, one showing that the rate of deterioration of paint is more rapid in a marine atmosphere such as Brixham than in an industrial atmosphere like Derby.

The Industrial Waters (Corrosion) Sub-Committee, under Dr. J. W. Jenkin, Director of Research for Tube Investments Limited, has compiled a short brochure surveying knowledge and practical experience of corrosion by industrial waters, and this will be issued towards the end of the year. The Marine Corrosion Sub-Committee, under Professor J. E. Harris, has made a detailed study of the prevention of corrosion by sea water and the prevention of fouling. These researches, naturally, are largely applicable to the underwater protection of ships, and some very satisfactory results have been obtained under practical conditions.

### South African Railways & Harbours

DURING 1947, world-wide attention was centred on the South African Railways by reason of the Royal tour early in the year. An account of this important event in the transport history of the Union occupies the opening pages of the administration's report for the year ended March 31, 1947, a copy of which we have received from the General Manager, Mr. W. Marshall Clark. During the time the Royal family was in South Africa, the special train provided for them travelled 5,660 miles in the Union, and 1,284 miles in Rhodesia and the Bechuanaland Protectorate. The report recalls that the builder of the new air-conditioned coaches and special vehicles for the personal use of the Royal party had to complete them in nine months instead of the usual 2½ years. A description of the rolling stock, which was constructed by the Metropolitan-Cammell Carriage & Wagon Co. Ltd., appeared in our November 29, 1946, issue. At the present time, the coaches used by the Royal party during the tour form part of the Governor General's train.

The total earnings from railway transport of £60,810,161 during the year were the highest ever recorded, new high levels being reached under all headings except passengers, earnings from this source showing a decrease on account of a falling-off in long-distance bookings. Goods tonnage reached the total of 42,361,835 tons, an increase of 1,379,659 tons, producing earnings of £35,566,779, which was £7,099,512 in excess of the 1945-1946 total. Although passenger revenue declined by over £1,000,000, the total number of passengers carried constituted another record, which was attributable to greater third class travel, particularly on suburban services. The number of journeys made in all classes was 240,841,062, comparing with 233,924,293 in the preceding year.

Several improvements were made in passenger services, including the provision of separate daily trains from Johannesburg to Port Elizabeth and East London, and the introduction of an "Orange Express" service between Cape Town and Durban as a permanent feature. Receipts from all services operated by the administration, except steamships, showed an increase for the year, but higher working expenses resulted in deficits of £640,512 and £14,681 being recorded from railway and airways operations respectively. There was, however, a surplus from all services of £640,716, comparing with a deficit of £883,088 in the preceding year. Net revenue appropriations of £300,000 left a final surplus of £140,716, as against a deficit of £1,870,088 in 1945-1946, when there was also a deficit in the combined operating results and an appropriation of £987,000 was made to net revenue. Some details of the railway operating figures are tabulated below:—

	1945-46	1946-47
Route-miles open	13,309	13,331
Train-miles	71,922,225	75,727,282
Passenger journeys	233,924,293	240,841,062
Goods and minerals (tons)	25,472,114	27,266,695
Coal traffic (tons)	15,510,062	15,095,140
Ton-miles (revenue-earning)	9,815,847,170	10,249,943,758
Revenue haul (miles)	236	238
Operating ratio (per cent.)	77.29	76.06
Percentage return on capital	£2 8s. 0d.	£2 14s. 7d.
Passenger receipts	14,766,600	13,682,885
Goods and mineral receipts	28,467,267	35,566,779
Coal traffic receipts	5,591,567	6,427,453
Total earnings	53,187,895	60,810,161
Ordinary working expenditure	38,189,619	44,246,628
Depreciation	2,921,787	2,005,512
Surplus over working expenditure	12,076,489	14,558,021
Surplus over interest, etc.	dr. 718,099	dr. 640,512
Capital expenditure, open lines	186,150,475	199,219,335

\* "Interim Report on the First Series of Tests on Formulated Priming Paints for Structural Steelwork (R28)." By Joint Technical Panel (J/PL) on Paints for Structural Steelwork, December, 1946. Copies are available from the British Iron & Steel Research Association, 11, Park Lane, London, W.1



New works made satisfactory progress during the year. Approximately 70 per cent. of all the work in connection with remodelling the yard at Germiston was completed, and the construction of the Prospect goods depot, to relieve Kazerne, was proceeded with. Prospect is already handling between 150 and 200 wagons daily. Operations in connection with the new station at Johannesburg consisted mainly of excavations to the north of the existing station, and the construction of a new temporary road bridge. An additional track, with platform accommodation, was ready in time for the Christmas passenger traffic. Good progress was made with the foundations and columns for the new electric running sheds at Braamfontein. During the year, the Germiston-Angelo and Canada-Phomolong lines were electrified and handed over to traffic. Improvements have been made to the electrical supply for the lines in the Cape electrified area, while in the Reef area, rehabilitation and improvement of the 6.6 kV. distribution system has been carried out. The increase of 22 miles in the route-mileage of the system is accounted for by the opening of the line between Oogies and Van Dyksdrift on June 1, 1946.

By the end of the financial year, 66 new steam locomotives imported from overseas had been placed in service. Some of the 28 electric locomotives on order for the Western Transvaal system were brought into use after the close of the year. The 3,272 new goods vehicles put into traffic comprised 1,500 imported from Canada, 515 from Great Britain, and 10 from the United States. A large number of new coaches is on order from overseas, but only 31 were placed in traffic during the year. Basing the figure on recent quotations, the report gives the cost of importing first and second class saloons from overseas as approximately £14,500 each, whereas before the war the cost of similar vehicles manufactured in the administration's workshops averaged between £3,500 and £4,500. It is not practicable at present, however, to undertake a large-scale manufacture of saloons in the Union on account of the shortage of teak and other suitable timber.

The report records the placing in traffic in October last year of the first of 12 "S1" class shunting locomotives built at the Salt River workshops. Construction of these locomotives began in 1945, and to expedite matters the fabrication of parts was distributed between Salt River, Pretoria, Durban and Pietermaritzburg workshops, although the major portion of the work and the final assembly of the locomotives remained in the hands of Salt River. The first of these engines was named *Voortrekker* by Mr. F. T. Bates, Senior Railway Commissioner, at a function at Salt River on October 8, 1947. The class was described in our issue of March 19.

### \* \* \* Flat-Bottom Track

THE keen desire to know more about the relative economics of bull-head and flat-bottom rail most likely would not have developed in this country, but for the rising costs and the shortage of labour and materials which prevailed even before the war, suggested Mr. Charles E. Lee, in a recent paper to the Permanent Way Institution.\* Cost of maintenance so increased that it became very well worth while to examine whether any other form of track, even if it were initially more costly, would result in overall economy.

In his comprehensive review of the potentialities and development of flat-bottom track in Great Britain, Mr. Lee made extensive reference to experiments on the L.M.S.R. and said that compared with the 100-lb. B.S. bull-head rail, the 110-lb. B.S. flat-bottom section had the advantage of 41 per cent. increased strength in the vertical plane, and the wide foot (6 in.) gave considerably greater resistance to bending in the horizontal plane. Taking the standard 95-lb. B.S. bull-head as a basis, the 110-lb. flat-bottom was 43 per cent. stronger in the vertical plane, the 113-lb. 62 per cent., and the former 131-lb. American section 85 per cent. stronger.

Considered as a beam, the 113-lb. flat-bottom rail was 62 per cent. stronger and 88 per cent. stiffer than the B.S. 95-lb. rail. The 113-lb. flat-bottomed rail was approximately two and a half times as stiff laterally as the bull-head section, due to the bottom flange of 5½ in. The B.S. 110-lb. flat-bottom rail was

even better in this respect and with its 6-in. base, was three times as stiff. The greater stiffness of the flat-bottom rail distributed the load over more sleepers, with the result that individual sleepers were less affected, and once the track had been properly packed and lined, it needed less attention than did the bull-head track. Because of its lateral stiffness, flat-bottom track may maintain its alignment more easily, but this stiffness may possibly cause increased side cutting, which was more prevalent in the U.S.A. than in this country. Flat-bottom rail, with its heavier fishplates, provided a stronger and smoother joint, with resultant reduction in maintenance of joint sleepers; but, although there was less likelihood of the joint becoming crippled with the stiffer flat-bottom track, the effect of the heavier hammer-blow produced rail end batter.

Concerning the manufacture of the components of flat-bottom track, the rolling of the flat-bottom rail was more difficult than for bull-head rail and, because of distortion during cooling, internal stresses were higher. For this reason flat-bottom rail had to be handled more carefully than the bull-head. The present-day cost of materials for 113-lb. flat-bottom track with elastic spikes was approximately 6½ per cent. a mile more than for bull-head track. The permissible wear of the head of the rail was practically the same in both cases, which suggested an equal main-line life, and an equal recovery value for use in secondary tracks. On the other hand, though sole-plates could be rolled as a mass production job, the casting of chairs was a specialised process, and involved the employment of foundrymen, of whom there was an insufficient supply. The bearing area of a rail in a 95-lb. B.S. chair seat was about 20 sq. in., whereas the bearing area of 113-lb. flat-bottom rail on the soleplate was 44 sq. in., which should be beneficial from the "galling" viewpoint, coupled with the greater vertical stiffness of the flat-bottom rail.

From the point of view of initial laying in, there was little difference in the total weight to be handled of either bull-head or flat-bottom track. Although less work at the site was involved by the receipt of chaired sleepers, in the case of flat-bottom track fewer operations were required at the main depot where sleepers were creosoted; adzing was unnecessary in the case of sleepers with sawn face, and the chairing operation abolished. On the ground, the work of handling plain sleepers was lightened, but more men were required per rail to handle flat-bottom track, because of increased weight, and furthermore, greater care was required in unloading rails. If laid in by ordinary hand-methods, flat-bottom track apparently required 25 to 50 per cent. more manpower. Against this, the apparent disadvantages of the extra weight of each rail could be obviated by the use of pre-assembly methods and installation by crane. If a pre-assembly method was used, equal labour at the site appeared to be required for either flat-bottom, or bull-head track. In fact, it was not improbable that the association or otherwise of flat-bottom track with pre-assembly and crane laying would be a deciding factor in the items of installation and relaying costs.

Mr. Lee expressed the opinion that although in early years, the elastic spike required very little attention, and therefore day-to-day maintenance involved in keys, chair-bolts, or chair-screws was eliminated, it did not yet appear that this saving would be enough to warrant a reduction in the strength of length gangs. When sleepers begin to deteriorate, an increase in day-to-day maintenance to elastic spikes was reasonable to expect. The life of the elastic spike would doubtless prove to be an important factor in deciding the question of the superiority of the flat-bottom track, but opinions seemed to vary. Although invented by a German, it apparently was now condemned by Germans, who stated that its holding power deteriorated after 7 years; in Great Britain it had received good reports so far.

A considerable period of experiment would be necessary before it became possible to translate into terms of an accurate financial comparison, the relative merits of bull-head and flat-bottom track, under British conditions. Mr. Lee did not think that flat-bottom track so far had shown itself to be so superior to bull-head track that the question of additional cost would be a secondary matter, and he felt that the matter would be decided ultimately on economic grounds, in respect of which sufficient data were not yet available to enable a worthwhile view to be expressed.

\* "Flat-Bottom Track in Great Britain," read before the Permanent Way Institution at Croydon, on May 5, by Mr. Charles E. Lee, Associate Editor, *The Railway Gazette*, with Mr. Taylor Thompson, President, in the Chair

## LETTERS TO THE EDITOR

(The Editor is not responsible for the opinions of correspondents)

### The Growth of "C" Licences

178, The Mall,  
Kenton Road, Harrow, May 26

TO THE EDITOR OF THE RAILWAY GAZETTE

SIR,—I note on page 589 of your issue dated May 21 that you give figures showing the increase in the number of "C" licences taken out between December 27, 1946, and December 26, 1947.

Whilst I must admit that the increase appears to be large on paper, I would suggest you examine and publish details of all the new "C" licences taken out between the dates mentioned, relating the new licences to the carrying capacities of the vehicles concerned. I would suggest four categories:—

- (a) 1 ton and under;
- (b) Over 1 ton up to and including 2 tons;
- (c) Over 2 tons up to and including 5 tons;
- (d) Over 5 tons.

I think, when you analyse the increase in the number of licences taken out, you will find a good proportion come under categories (a) and (b). These types of vehicles, as you know, are used by retailers for the local distribution of milk, bread, fruit and vegetables, etc., and I cannot believe that these people are "actuated by the desire to assure themselves against dependence on a public transport monopoly."

They are forced to use light vans in view of the present difficulty in obtaining roundsmen, and I do feel that their action will in no way affect the working of the British Transport Commission.

Yours faithfully,

H. S. LEECH

### Train Service Deficiencies

"Stanilands," Radwell,  
nr. Felmersham, Beds. May 26

TO THE EDITOR OF THE RAILWAY GAZETTE

SIR,—I do not know whether you have yet had time to study, or perhaps had your attention drawn to, the summer timetables of British Railways.

I refer to the L.M.R., the old Midland Section in particular, and that section in the old days I think you will agree was one of the best-balanced services? On the outbreak of war it was wrecked completely, and has not, except in very few instances, been reconstructed. "Service" these days is about the last thought that the people concerned have for the travelling public.

Take, for example, the service to my local station, Sharnbrook, 56 miles from St. Pancras. Excluding the 6.20 a.m., there is nothing from London, except on Saturdays, until the 3.22 p.m.! After that there are three trains in the next three hours or just over! On the up run there is nothing between the 9.34 a.m. and the 3.14 p.m., and now the "last one" up in the evening at 8.28 p.m. has become "Saturdays only."

The service between St. Pancras and Bradford and *vice versa* is another interesting study. The last one down leaves St. Pancras at 4.50 p.m. and the last one up at 2.45 p.m. It is also interesting to note that on Sundays one need not leave Bradford until 4 p.m.!

The above are only a couple of examples, and I could without effort detail many more. Views of other readers would be interesting. Is there any hope of improvement under nationalisation? One wonders!

Yours faithfully,

HARRY W. FRANKLIN

18, Milverton Terrace,  
Leamington Spa, May 21

TO THE EDITOR OF THE RAILWAY GAZETTE

SIR,—It is to be hoped that the development of cross-country routes by British Railways has only been postponed, for the summer timetables in this respect are disappointing.

Imaginative planning would accelerate travel between East and West. Further, congestion would be relieved both in London and Birmingham by the inauguration of such a train as Peterborough to Gloucester (possibly with through coaches to Bristol and South Wales) via Rugby, Leamington Spa, and Stratford-on-Avon. Thanks to the connection between the L.M.R. and W.R. at Leamington, no locomotive change would even be necessary on such a valuable run.

It also seems extraordinary that later services have not been provided on important routes. Incredible as it may seem, the last train from Cardiff to Birmingham Snow Hill is at 5.5 p.m. After that, in the slang of the R.A.F., you've had it!

Extraordinary, too, is the fact that the last train from Paddington to Worcester is at 6.5 p.m. How will unfortunates returning by some of the Continental services fare when they get to London after this hour and still have to go on to Worcester, Kidderminster, etc.?

You will have observed also that through facilities to Stratford-on-Avon—a Mecca if ever there was one—from London are still missing. It is still impossible for Birmingham people to go to the Shakespeare Memorial Theatre in an evening and return except by road, for the last train home is at 9.30. The same applies to Coventry, another great centre of population. The last train from Stratford-on-Avon that will give a connection to Coventry via Leamington Spa leaves at 7.37 p.m.

While realising that British Railways are doing their best—they tell us so—one awaits with no great optimism a touch of imagination in the provision of extra trains that will be of great service to the public.

Faithfully yours,

GILBERT DALTON

### Preservation of Railway Relics

18, Wheatsheaf Close,  
Woking, Surrey, March 29

TO THE EDITOR OF THE RAILWAY GAZETTE

SIR,—I have been very interested in this correspondence. There are four locomotive types that I should like to see preserved; three of them are quite small locomotives and therefore would need little storage space. They are as follows:

- 1.—A L.N.W.R. express passenger locomotive ("George V," "Prince of Wales" or "Precursor").
- 2.—A Hawthorn's of Leith well tank.
- 3.—A Sharp, Stewart long-boiler saddle tank.
- 4.—An Aveling & Porter geared locomotive.

In connection with (1) above it might be recalled that L.M.S.R. 25348, *Coronation*, almost certainly would have been preserved but for the war. (2) above is a little-known class of locomotive; four are known to be still extant. The best known are the two at the N.C.B. Howe Bridge Colliery, built in 1861 and 1867. (3) above was a once numerous class of locomotive. The only one I know of is *Wardley* at the N.C.B. Walkden Yard, though there may be others in Durham. The Aveling & Porter locomotives are still comparatively numerous, and I understand that efforts to secure the well-known example at Weedon brickworks may soon meet with success; another really good one still exists at Borough Green brickworks, in Kent.

Yours faithfully,

J. B. LATHAM

### Short Cut-off Working

12, Trinity Road,  
Chelmsford, Essex, May 8

TO THE EDITOR OF THE RAILWAY GAZETTE

SIR,—I am surprised at Mr. Theobald's assertion in the April 30 issue that the ex-L.N.E.R. "B12" locomotives are better suited to short cut-off working than the "B17s" or the "B1s." My own impression was that the "B17s" were most suited to this method, especially when higher boiler pressures were in use before 1941. At this time, I believe, many of them could be pulled up to 10 per cent. for downhill work. The conjugate gear also was better maintained in those happy days. It would be interesting if Mr. Theobald would support his statement with quotations from performance on the road.

In any case, there is a good deal of vagueness, for several reasons, about the actual cut-offs in use. The setting will vary among different engines, and, when due for shopping, an engine will require longer cut-offs than when in her prime. Moreover, cut-off is usually adjusted by "feel" rather than conscious reading off the scale; often, too, the calibration is faulty, while there are often only three intermediate markings between full- and mid-gear. Thus a driver usually will have no very clear recollection of his actual positions during a run.

All drivers do not practise full regulator working on the "B1" and "B12" classes, but I think it is agreed generally that a "B17" will not tolerate any other method. Of course, the "B12s" are very free running machines up to 90 m.p.h., but the "Sandringhams" also regularly attained speeds of 90 and over with ease on the G.C. section, often with a heavy load.

Mention of free running brings into the limelight the comparative area of ports and valve openings and the design of steam and exhaust passages; details of these crucial factors in front-end behaviour are not widely disseminated.

We have been informed (*The Railway Gazette*, March 8, 1946) that "'B2' No. 1671 on one occasion, after the cut-off

scale had been checked, maintained speeds of 70 with 400 tons down gradients little more favourable than dead level, whilst working at 5 per cent." I should doubt this, but, if it were true, there should be theoretical reason why the "B1s" and "B17s" could not be worked at 5 per cent., since the value events are theoretically the same. It is hardly ever possible, however, to work a Walschaerts engine in less than 10 per cent., as on "Royal Scots," "Nelsons," and the "Sandringhams" just quoted. A much more usual working position is 15 per cent., and some drivers prefer 18 per cent.

Even in these comparatively enlightened days of locomotive engineering, there is much slovenly thought about this matter of front-end performance. Most modern express engines, including "B1s," "B12s" and "B17s," are designed specially for full expansive working, but on the road many drivers prefer other methods. Thus the older L.N.E.R. Pacifics, the "Royal Scots," and the "Arthurs," "Nelsons," "Schools" and both Pacific classes of the S.R. are, or were, often driven with a longish cut-off and a small regulator opening, although their designers obviously had a more expansive working in view. Although the "Nelsons" did not like this treatment, the other classes appeared to thrive on it.

The Gresley conjugate gear, also, has been subjected to severe criticism on theoretical grounds, but indicator diagrams rather suggest that slight inaccuracies of timing in the middle cylinder events (when the gear is correctly maintained) are a help rather than a hindrance in the development of high speeds. When the engines are fully linked up in these conditions, the middle cylinder actually gains in power output while working at the same nominal cut-off as its neighbours.

I see little correlation between theory and practice in front-end performance, and conclude that our ideas of it are still unnecessarily nebulous.

Yours faithfully,

J. D. MUNNION

## Co-ordination of Transport

59, Grosvenor Avenue,

Charlton, Surrey. May 24

TO THE EDITOR OF THE RAILWAY GAZETTE

SIR.—One might imagine that if co-ordination is a predominating feature of service to the community, then co-ordination would be carried to its legitimate end within the nationalised framework.

Before the war, the railways regarded an interest in air transport as an essential if somewhat unfortunate evil. Within the framework of their own and associated air routes, they introduced a form of inter-availability of tickets which was elaborate and extensive, and had reached some agreements for conveyance of freight by rail and air. They also wielded the big stick of the Railway Clearing House against competitive air lines.

The problem, however, is one which never can be solved while railway officials remain railway-minded officials; and while air officials remain air-minded officials. Very few railwaymen appreciate, or care very much about, the special problems applicable to the skilful loading of aircraft to obtain maximum use of available payloads. Very few air officials have any real comprehension of the vastness of rail or road

transport, the complicated background, and the multifarious regulations and conditions under which they operate.

Under the British Transport Commission, all forms of transport of use to the traveller and trader are combined, except the newer and important form of air transport, which goes its separate way under a separate Ministry. Thus, whatever attempts may be made to co-ordinate, two separate ministries will ensure that air transport is not really transport at all, and the old conditions will be perpetuated, where air transport is tolerated but not recognised as part and parcel of the means whereby passengers and goods are moved.

I imagine that under this method, when questions of co-ordination are considered, the material approach will not be "of what benefit is this to the traveller or trader?" but "what possible deleterious effect can this have on our own particular form of movement?" In short, there will be no transport minds at work at all, merely sectional ones, as there always have been.

The Italians do it better. They have regional organisations responsible for the co-ordination of transport to get the best out of it, be it air, road, rail (State-owned or in concessions from the State), inland waterways, and coastal shipping, under the policy direction of an organisation which is separate from the State Railways, and thus not dominated by them.

Yours faithfully,

A. C. PING,  
Lt.-Colonel

## British Railway Timetables

17, Cavendish Avenue,

Eastbourne, Sussex. May 23

TO THE EDITOR OF THE RAILWAY GAZETTE

SIR.—Concerning your comments on Mr. Best's letter in your issue of May 21, it should be noted that the British Railways timetables and *Bradshaw* are not interchangeable. *Bradshaw's* value lies in its giving the current monthly services. Since the L.N.E.R. and L.M.S.R. publish supplements giving full details, month by month, of all alterations, and the G.W. and Southern seem to stick to the timetables to a large extent, this advantage is hardly worth the extra cost.

Another advantage of *Bradshaw* is that it gives details of the independently-owned railways, but here again several of these are shown in the L.N.E.R. and S.R. timebooks.

*Bradshaw* also purports to include the Irish railways, but only gives very sparse details, especially as regards services in Eire.

In the London suburban area, *Bradshaw* in many cases shows only the first and last trains with the statement that "trains run at frequent intervals throughout the day." An hourly service—on the Nunhead—Crystal Palace (H.L.) line between 10.30 and 3.30 Mondays to Fridays—can hardly be described as "frequent." Incidentally, during the war this statement was paired in *Bradshaw* with a rather contradictory note to the effect that "services are curtailed between the hours of 10 and 4 on Mondays to Fridays."

*Bradshaw* is not what it was. But that, I suppose, is typical of the times.

Yours faithfully,

J. J. SMITH

## Publications Received

**The Tal-y-Llyn Railway.** Compiled by Lewis Cozens. Published by the Author. Sutton, Surrey: 98, Grove Road. 8½ in. × 5½ in. 24 pp. Price 2s. 9d. (including postage).—The author has given a careful account of the history and development of one of the few surviving independent railways, with details of the rolling stock and locomotives. There is evidence of both research and local knowledge. The maps and plans, however, are capable of considerable improvement.

**Handbook of the Scientific Instrument Manufacturers' Association of Great Britain Limited.** London, 1947: 26, Russell Square, W.C.1. 8½ in. × 5½ in. 219 pages. Illustrated. Price 10s. 6d. post free.—The reputation gained by British scientific instruments during and since the war will be carried further afield by this first post-war edition of S.I.M.A. Handbook. The association is evidently well

aware of the contribution which its 84 members can make to the export drive and recognises that there is room for a vast expansion; present production is at the rate of £50 million a year. The buyer will find the book a mine of information, with an index listing about 2,000 products made by member-firms, in addition to a directory and announcements by members. A chapter is devoted to each of the six sections into which members are divided and much interesting data are included on research and the history of the industry.

**A Trip by the Wye Valley Train.** By Thomas B. Peacock. Published by the Author. Halstead, Essex: 30, High Street. 8½ in. × 5½ in. 20 pp. Illustrated. Price 2s. 6d. (2s. 10d. including postage).—This brochure is Essay No. 1 of a series intended to form part of an eventual volume. The story of the line between Chepstow and Monmouth is well told, and there are two folding plates, one showing

the whole route, and the other details of the Tintern neighbourhood.

**Rectifiers for Railway Service.**—The Hackbridge & Hewitt Electric Co. Ltd. has issued an illustrated booklet describing the extensive installation of Hewitt rectifiers on electrified railways throughout the world. Photographic illustrations and sketch maps of all the systems concerned are reproduced. Third-rail and fourth-rail lines, and others with an overhead conductor, feature in the booklet, and the supply voltages range from 550-2,400 V. d.c. Each rectifier unit consists merely of a bulb, equalising coils in the main anode circuits, a d.c. isolator link in the main cathode lead, and a starting and exciter circuit, with ventilating fan and auxiliary circuits. All rectifiers are self-contained and are assembled in banks according to the capacity required. The method of assembly is flexible, permitting convenient installation in existing buildings or on awkward sites.



## The Scrap Heap

NEW RECRUIT FOR BRITISH RAILWAYS  
Although Glasgow University students are at present in the throes of degree examinations, they are apparently still ready for a laugh.

A notice on the Students' Union notice-board this week invites those interested in the formation of a University Railway Society to append their names below.

The first name to appear reads: "Duke of Wellington, c/o Waterloo."—*From the "Glasgow Evening Citizen."*

### 100 YEARS AGO

From THE RAILWAY TIMES, June 3, 1848

#### RAILWAY RESOURCES FROM AGRICULTURE.—

At a time when commerce languishes, and trade and manufactures are depressed, it is gratifying to observe that the owners and occupiers of land are at length become fully sensible of the advantages of railways. The quantity of food poured into the metropolis weekly by railway almost surpasses belief; nor is it the agriculturist alone who is benefited by the railway system. Even the hardy fisherman on every part of our coast, now finds a ready and remunerating market for any quantity of the perishable fruit of his enterprise and toil. The following quantities of provisions were forwarded to London, *via* the Eastern Counties Railway, during the week ending May 27th. Beasts 2,250, calves 112, sheep 7,980, pigs 817, grain 13,572, flour 5,327 sacks, meat 168 tons, poultry 26 tons, fresh fish 70 tons, fruit and vegetables 198 tons, ale and porter 207 tons, wool 159 tons, wines and spirits 78 tons, milk 20,848 quarts, bread 79 cwt., and general merchandize 2,500 tons.

#### FIFTH COLUMN FEARS

Speakers at the conference of the Associated Society of Locomotive Engineers & Firemen in London recently expressed misgivings at the presence in the British Transport Commission and the Railway Executive of persons who were not Socialists and did not agree with nationalisation. One speaker said these people were trying to sabotage the railways and should be removed. Another claimed that the railways were so mismanaged previously that the war effort was hampered

from the first day to the last. No one would dare to treat their cars in the way the engines were treated. "Some of the men responsible received the O.B.E. They should have received a bullet. What is worrying us is that the same people are still there sabotaging the railways."

#### P.R.O.'S OFFSPRING

The gas companies started it. Mr. Therm has been dancing on our bedpost for years. He was followed by Mr. Gremlin and Mr. Chad. Mr. Squander Bug then joined. The latest entrant is a Mr. Jimp, a mad-looking composition of triangles. He, we are informed, is "the irresponsible sprite who makes road users reckless." "From posters throughout the country," it is promised, "he will point out how carelessness may kill, and warn you to 'Mind how you go.'"

Prospero, too, it will be remembered was as adept at conjuring up spirits. His servant Caliban, whom they tormented, complained:

*For every trifle they are set upon me:  
Sometimes like apes, that mow and  
chatter at me*

*And after bite me; then like hedgehogs  
which*

*Lie tumbling in my barefoot way . . .*

We can forgive Prospero for the poetry, but never that tap-shaped figment of the Metropolitan Water Board's imagination, who, with one finger held inane in the air, bleats:

*Fixing washers when you oughter  
Saves an awful lot of water.*

If ever any of these bogeys overcome the invincible repugnance which their appearance must induce even upon each other and cross-breed we fear for our lives and sanity.

Dongs with luminous noses, Pobbles without any toes, Jumbles, Jabberwocks and Jubjubs, beings stranger than any in Lewis Carroll or Edward Lear, will overrun this island and drive us into caves. We entreat our tormentors:

*Stow it, pal, enough's a feast,  
You're really giving us the creeps.*

—*From the "Evening Standard."*

Now it is surely up to the Railway, London Transport, Road Transport, Docks & Inland Waterways and Hotels Executive P.R.O.s to produce brothers and sisters for little Gremlin, Chad, Squander Bug and Jimp.



"Right. That leaves you thirty-four pounds nineteen and elevenpence for a start"

(Reproduced by permission of the proprietors of "Punch")

#### POLL ON SPILT MILK

But it would have been gauche to refer to old railways by name. For multiple-unit electric coaches, green is the selected experimental colour. This will hardly come as a shock to the suburban traveller south of the Thames (what was the name of that railway?) though he might prefer the word "pre-selected." But he, too, can express his opinion—in writing—to British Railways, and ask for sky blue, or perhaps green rather than greens. Yet there are dangers in all polls; the doctrine of the mandate and the popular will has its limitations, particularly on questions of taste. If the colours are open to the vote, the public will taste blood—separated perhaps by lines of spilt milk. They will demand the vote for lower fares, and first class travel for everybody at third class prices. And when that happens, faces on the Railway Executive will certainly be maroon, lined with golden yellow-black-golden yellow.—*From "The Economist."*

#### LUGGAGE LOGIC

As British Railways might have expressed it, following the lead of a recent "Report to the Nation" advertisement

O wrinkled brow, unfurrowed be,  
Let not "the luggage" get you down;  
Cultivate equanimity,  
Bid laughter substitute the frown!

Remove old labels that encumber—  
They may mislead some folk, you see—  
And don't forget the mystic number  
For luggage labelling is THREE.

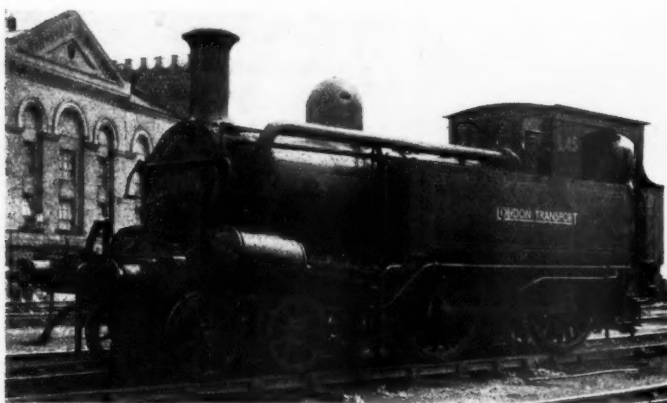
Stick one on tightly—tie another,  
And, to complete this "label lesson,"  
Here's a reminder to poor Mother:  
"Put one inside with your address on!"

Do this with all your trunks and cases;  
Secure them firmly 'gainst mischance,  
Then, labelled for their various places,  
\*Send the whole lot on in advance.

\*If you require more information,  
Inquire, please, at your local station.

A. B.

#### Veteran Locomotive for Preservation



Recent view taken at Neasden Depot, London Transport, of the 82-year-old 4-4-0 tank engine "L 45" recently retired from service and to be preserved and placed on public exhibition. The original drawing of Beyer, Peacock & Co. Ltd. was reproduced in connection with a plea for its preservation in our issue of February 6

# OVERSEAS RAILWAY AFFAIRS

(From our correspondents)

## CANADA

### C.N.R. Debt Burden

Funded debt of the Canadian National Railways, together with loans from the Dominion Government outstanding, amounted to \$1,272,320,000 at the end of 1947, according to a study made by the *Toronto Star*. This is 3.43 times the combined funded and perpetual debenture debt of the Canadian Pacific Railway, which totalled \$370,739,229. The interest debt burden of the C.N.R. is \$901,580,771 greater than that of the privately-owned system. This is attributed to obligations inherited from the railway companies—mainly the Canadian National and Grand Trunk systems—which were on the verge of bankruptcy when the exigencies of the first world war made it incumbent on the Dominion Government to take them over. Not only were the fixed debts of the two systems heavy, but capital assets were in such shape that great sums had to be expended in their rehabilitation.

In connection with the Grand Trunk system, the majority report of the Arbitration Board in 1921, appointed to determine the value of the preferred and common stocks, stated that they were worthless; that the liabilities were far in excess of assets; and that as earning power was unlikely to place the company on a sound financial basis for many years, the stock had no potential value.

Had the C.N.R. the same interest debt per mile of track as the C.P.R., interest charges would have been \$17,200,000 in 1947. As the profit for that year available for interest was \$27,939,150, there would have been a surplus of \$10,739,150.

## UNITED STATES

### Public Relations Broadcasts

Representatives of 12 railways serving Kansas City have participated in a series of broadcasts illustrating the contribution of rail transport to the growth of the city. Subjects dealt with included the wide range of goods facilities available at Kansas City, and the contribution the railways have made to the industrial economy of the Middle West. Assistance was given in the assembly and preparation of material by the Association of American Railroads. One of the programmes was devoted to the 45 railway companies which have representatives in Kansas City although they do not serve the city directly.

### Traders Benefit from Railway Radio

Some noteworthy improvements in the service provided for traders at Dallas, Texas, have resulted from the provision of radio equipment on seven shunting locomotives of the Missouri-Kansas-Texas system which operate throughout an industrial district extending for 14 miles through the city and its suburbs. Firms requiring wagons urgently for unloading can telephone to the yardmaster, who broadcasts a call instructing a locomotive working in the neighbourhood of the premises to make the necessary movement. Minor changes in the position of wagons awaiting discharge can be made without delay because of the ease with which a locomotive handy for the job can be located. The railway benefits by a reduction in shunting mileage, and by a saving in the

yardmaster's time, who previously sometimes had to leave his office and travel by car to locate a locomotive when it was necessary to give new instructions to the driver.

## ARGENTINA

### Patron Saint for Argentine Railways

The Argentine Government, by Decree dated April 3, 1948, has declared Our Lady of Luján to be the patron saint of Argentine railways. The Virgin of Luján is already the patron saint of the Argentine Republic and of the national highway system.

### Wage Increases on ex-British Systems

Although it had been decided that the staff of the former privately-owned systems would work in future under the wage agreement in force on the State Railways (see *The Railway Gazette* of November 28, 1947), an unofficial strike of the men took place on November 20, with the object of obtaining still further increases owing to the continued rise in the cost of living. The occurrence was reported in *The Railway Gazette* of November 28, 1947, and January 16 this year. These increases now have been granted, with back effect from December 1, 1947. Speaking in general terms, the result has been that all classified staff have received an increment of ps. 80 to ps. 100. Certain bonuses have been abolished, and the amount of these incorporated into salary.

## FRANCE

### "Morocco Express"

A train and boat service between Paris and Casablanca, Morocco, is to be run twice a week under an agreement drafted by French and Spanish railway officials in negotiations at Madrid. The train will be named the "Morocco Express." The journey is expected to take about 70 hr. On its first run, June 7, the train will leave Casablanca at 10 p.m.; and on the return journey, on June 11, it will leave Paris at 9.40 a.m.

Stops will be made at Bordeaux, Bayonne, and Hendaye, but no passengers will be set down or picked up at stations in Spain.

From Algiciras travellers will cross the Straits of Gibraltar by ship to Tangiers. In Morocco the express is to stop at Rabat and then run through to Casablanca. It will accommodate about 450 passengers. Visas for transit through Spain are to be issued at the Spanish consulates in France and Morocco.

### S.N.C.F. Budget Restricted

Some details concerning the S.N.C.F. budget for the current year are given by M. Marcel Flouret, President of the S.N.C.F. Administrative Council, in the review *Banque et Bourse*. For purchases of material and work to be undertaken this year, he says, the S.N.C.F. can count on a total credit of fr. 61,500 million, against fr. 63,700 million last year. Taking into account the sharp rise in prices, this means that there must be a considerable reduction in the work the S.N.C.F. can carry out.

The estimated reduction is around 40 per cent. It will lead to the stoppage or slowing down of important works, such as the electrification. Purchases of new material will be extremely restricted,

although the age and worn-out condition of much of the S.N.C.F. rolling stock makes such purchases absolutely necessary.

## SWITZERLAND

### German Lines in Swiss Territory

The transfer of the Reichsbahn line in the Schaffhausen district, in addition to Reichsbahn installations at Basle, from Swiss trusteeship to a new Franco-Swiss administration took place on May 1 (see also *The Railway Gazette* of February 13). Supervision of the Reichsbahn traffic on the sections concerned is now in the hands of a joint Franco-Swiss commission consisting of seven delegates of the French occupation authorities, and of seven Swiss delegates representing the Swiss Federal Railways, the Swiss Federal Office for Traffic, the municipality of Basle, the municipality of Schaffhausen, and others.

According to the provisions of the agreement, the capital invested in the Reichsbahn lines and property on Swiss territory will continue to be under Swiss trusteeship until a final solution is found.

## DENMARK

### The Summer Timetable

The summer timetable, in force from May 9, shows several improvements and an augmented train service. While the preceding timetable gave a train-mileage nearly 80 per cent. of that in 1939, the new one reaches 85 per cent. (Copenhagen electric suburban trains excluded), but it must be remembered that the number of passengers has doubled since 1939.

It has been possible to speed up the trains by a combination of shorter running times and reduced time at stations. In this way it has been possible to cut the time from Copenhagen to Frederikshavn from 11 to 10½ hr.; to Thisted, from 13 to 12 hr.; to Sønderborg from nearly 10 to nearly 9 hr., and so on to most other towns.

A new *Lyntog* type train has been introduced, made up of two diesel motor coaches and two bogie coaches. A small kitchen is provided for serving light hot or cold meals. The train runs four days a week from Copenhagen to Tinglev, where it is divided, separate portions running to Sønderborg and Tønder (in South Jutland). The timing cuts an hour from the previous best schedule.

The connection with Great Britain via Esbjerg—Harwich, which hitherto has operated three times a week, is increased to five times a week. The *Lyntog* train "Engländeren" between Esbjerg and Copenhagen proved to be of too small capacity, and has been replaced by a formation consisting of two diesel railcars, two first class coaches, and one common class coach, running to nearly the same time as the *Lyntog*. The new train has a small kitchen for serving light meals.

Connections with the South have been increased by the operation of the "Nord Express" in two portions, the main train serving Belgium, England, and France; and the other portion, now called the "Scandinavia—Switzerland Express" serving Switzerland and Italy.

The fastest train in the new timetable is the *Lyntog* "Østjyden" covering the 38.3 miles between Roskilde and Slagelse in 35 min., averaging 65.6 m.p.h.; and the longest non-stop run is provided by the *Lyntog* "Kronjyden" between Nyborg and Aarhus, a distance of 122.9 miles, covered in 126 and 127 min., averaging 58.6 and 58.2 m.p.h.

## The Design of Locomotive Axleboxes

*Function of the locomotive axlebox, principal features of its construction, and a comparison of the advantages from use of plain or roller bearings*

*By George W. McArd, A.M.I.Mech.E.*

**F**OR the successful operation of any locomotive unit, every care must be exercised in designing the axleboxes, and in view of the variety of types in service, an analysis of the position should be helpful.

The primary function of an axlebox is that of an efficient bearing, in which the axle may revolve, but the conditions under which it serves are so vastly different from the ordinary shaft bearing, that comparison is difficult, and the wonder is that so many thousands of axleboxes give practically no trouble. Most shaft bearings are rigidly secured to some fixed structure, but axleboxes must have vertical and transverse movement in their guides, and at any instant be free to take up an inclined position in the frame, such as will occur when the engine superstructure rolls on a curve.

Furthermore, while sustaining its proportion of the weight of the vehicle, it also receives the alternate pull and push due to steam action, or the load due to braking, and throughout its life takes a hammering from every rail joint and crossing traversed.

Good proportions for the axle journals are most important, and the following values are in usage today in many successful designs:—

	American practice lb. sq. in.	British practice lb. sq. in.
<b>PASSENGER ENGINES</b>		
Leading bogie ...	160	150
Coupled ...	175	180
Trailing truck ...	160	170
Tender ...	300	250
<b>FREIGHT ENGINES</b>		
Leading bogie ...	180	150
Coupled—trailing excepted ...	200	180
“ trailing ...	185	180
Trailing truck ...	180	170
Tender ...	325	250
<b>SHUNTING ENGINES</b>		
Coupled ...	200	224

Mr. A. E. Kyffin pointed out in the paper he read before the Institution of Locomotive Engineers (see *The Institution of Locomotive Engineers Journal*, No. 51, page 608), that unit bearing pressures alone are not the safest standard by which journal proportions can be judged; he contended that the unit bearing pressure must be combined with the peripheral speed of the journal, and mentioned that Professor Goodman embodied this principle in his method of determining journal sizes. A useful formula frequently is used as a check, on the axle proportions, namely,

$$TWV/dl$$

where  $T$  = the tractive effort, based on a mean effective pressure of 30 per cent. of the boiler pressure, divided among the number of coupled wheel journals

$W$  = coupled wheel dia. in in.

$V$  = peripheral speed of a point on the journal, in ft. per sec., based on a speed of 250 r.p.m.

$d$  = dia. of journal in decimals of a ft.

$l$  = length of journal in decimals of a ft.

The dia. of the journal usually is fixed in relation to strength *plus* wear, and the length will be settled by the appropriate unit bearing pressure. A two-throw crank axle for the 4 ft. 8½ in. gauge with a 20-ton, or over, rail load sometimes causes difficulty, as the distance from wheel hub to crank web may be relatively short, and the adoption of a compromise may be unavoidable. A point which has been overlooked in numerous designs, is the

higher surface velocity entailed by using an axle larger in dia. than necessary purely for bearing pressure; this may have a marked effect on the oil consumption, and the designer should endeavour to maintain a good relation between journal dia. and length. This is not easy to define as so many factors call for consideration, but an addition to the length which permits a reduction in dia. is always a step in the right direction, assuming the stress values permissible are not transgressed.

In the locomotives of 30 or 40 years ago designers were somewhat partial to axles with collars, particularly at the inner

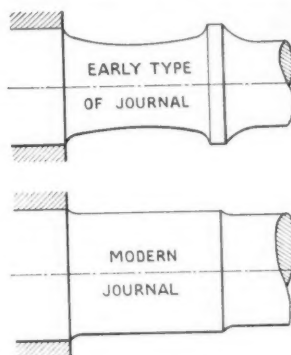


Fig. 1—A contrast in axle journal designs

end of the journal, presumably to control the axial movement of the shaft. To maintain the strength of the axle demanded large fillets at each end of the journal, and these reduced the effective bearing surface quite appreciably, besides creating running and maintenance difficulties. The best practice today eliminates collars and, keeping the variation in axle dia. at wheel seat, journal and body as small as possible, secures the maximum useful bearing surface. In numerous cases

this is achieved even on crank axles, as the built-up type is preferred in many quarters and does not require the large radius corner of the forged axle. A type of bearing by no means uncommon in earlier locomotive stock is shown in Fig. 1, and few maintenance men of these times would care for its return.

If the many designs of axlebox now in service were to be examined closely, it would be found that, in essentials, they could be grouped into three classes. Figs. 2 to 4 illustrate the main features of each class, and they are respectively: Solid bronze, or gunmetal axlebox; forged-steel box with fitted bronze or gunmetal bush; steel cast box with pressed-in bearing of bronze or gunmetal. The majority of these have recesses in the bearings for white metal, or special antifriction metal, to be run in as bearing pads; in some cases, however, the white metal extends over the entire surface and over-runs to the face in contact with the wheel hub.

The solid box has many attractive points—the fact that bush and box are one is not the least of these. Good practice usually insists that large surfaces in frictional contact should be of different metals, and the bronze (or G.M.) box working in steel guides gives an ideal combination. But the non-ferrous casting will not compare with the steel box in its ability to resist shocks, and because of its relatively lower unit strength, it must be made of larger proportions, which means that, in material at any rate, it is costly. Not having a loose bush, however, it scores in labour costs to some extent, and when the box is no longer fit for service it has a relatively good scrap value; the trend today, however, where plain bearings are to be used, is definitely towards the steel axlebox.

As already indicated, the steel box may be a forging or a casting, and though many forged units are in service, the majority of steel axleboxes today are castings. In the industrial type of engine, boxes frequently are of cast iron, which also gives good service in steel guides, but naturally is inferior in strength to steel. The forged axlebox scores in two respects, strength and almost complete immunity from “wasters.” But forging and machining costs are heavy, and because of this, modern preference is extending to the steel casting.

Where the latter is used, liners are fitted for contacting the guide surfaces and the

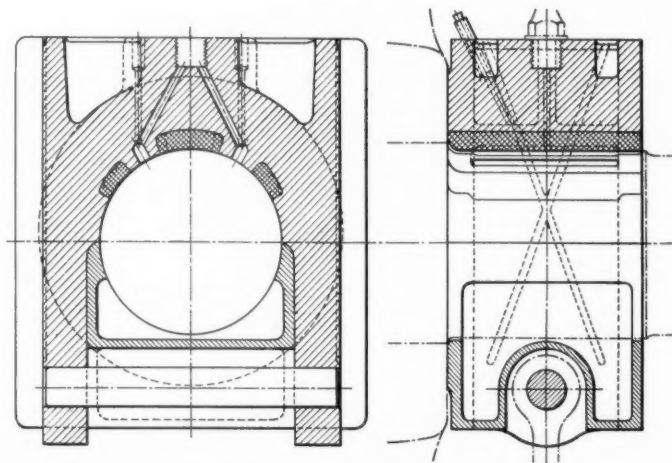


Fig. 2—Solid bronze axlebox



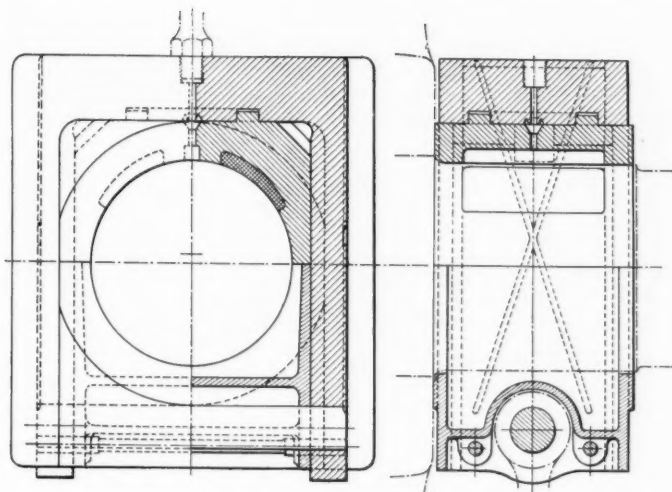


Fig. 3—Forged-steel axlebox

In the U.S.A. and on many foreign lines, cakes of grease take the place of the oiler, the lubricant being pressed on to the bearing through perforated metal by strong spring action. Wherever possible, keeps should be capable of being withdrawn to facilitate inspection of the axle journal, and where grease lubrication is adopted, no holes or channels should be cut in the bearing, as otherwise, grease will be forced through to waste. Where the whole keep cannot be withdrawn, a small inspection plate may be provided.

#### Renewing a Bearing

Bogie, truck and tender axleboxes are in a different category, and here it becomes chiefly a matter of carrying a prescribed load at more or less high speed, for a prolonged period. The inside bogie or truck box often is similar in design to the coupled axlebox which supports its load on the top, but the outside bogie, or truck box is a different proposition (which also includes tender axleboxes) and its design must have an easily removable front cover to give access to the bearing, whether for examination, oil replenishment, or the renewal of the bearing. This easily is effected in a well-designed axlebox, and a modern example is shown in Fig. 5. To renew a bearing, remove the load from the box sufficiently to enable the axlebox to be levered up, the key "X" removed and the bearing replaced by a new—or a re-metalled—unit. The key being put back, the load can be restored and the unit is ready for service. These axleboxes may function in guides, or they may have large flanges cast on for attachment to the bogie or truck frame. Designs vary between

wheel hub. These are usually of bronze and are secured to the box by bronze screwed rivets turned from the bar. In some cases, a lining of white metal is cast in, but rarely indeed is the steel box in direct contact with the guides or the wheel face. The writer recalls engines with forged steel boxes having the guide faces specially hardened. Trouble frequently was experienced by the maker due to distortion, and occasionally cracking occurred during the hardening process; all things considered, the practice is hardly to be recommended, although workmen who acquired experience in the process often could manipulate the box satisfactorily after the hardening was complete, and the life of this unit was wonderful.

Two designs of bush are shown in Figs. 3 and 4, that in Fig. 3 being bedded into position and that in Fig. 4 forced in under pressure varying according to its size; for an axlebox built to carry a load of 8 or 9 tons, this pressure may be from 12 to 15 tons. After final location, it is secured by two screwed plugs of similar material to the bush, each suitably locked.

#### Ample Bearing Surface

A point which many engineers regard as most important if hot-boxes are to be kept to a minimum, is the provision of an ample bearing surface on the horizontal centre line, and in some designs the bush is carried down to this point and a portion provided at the upper edge of the keep, the latter being of bronze, or gunmetal, similar to the bush. By this means, the bush and keep together present a sound bearing to the horizontal thrust of the piston load, and such a scheme would appear to have quite a logical basis. It is, however, only adopted for the driving boxes, and is not considered necessary for coupled boxes.

There has been much controversy on the subject of lubrication, and the best point at which the oil should be introduced. Some advocate the true top centre as the ideal, while others believe that the right place is on a line, or lines, drawn at 30 deg. to either side of the vertical centre line. As the load on any axlebox is a combination of the static loading plus the load on the piston, the second view would seem to be the more reasonable, as the cutting of a groove on the top centre represents the removal of material from a vitally loaded area.

All modern driving and coupled axleboxes occupy the inside position, though the pioneers of the locomotive chose the outside box and used outside cranks for transmitting the drive by rods to the several axles. The outside box has much to commend it, being usually a cooler unit and certainly more accessible for inspection and oiling. Unfortunately, the outside crank design of engine is a costly affair, and likewise heavier at the rail.

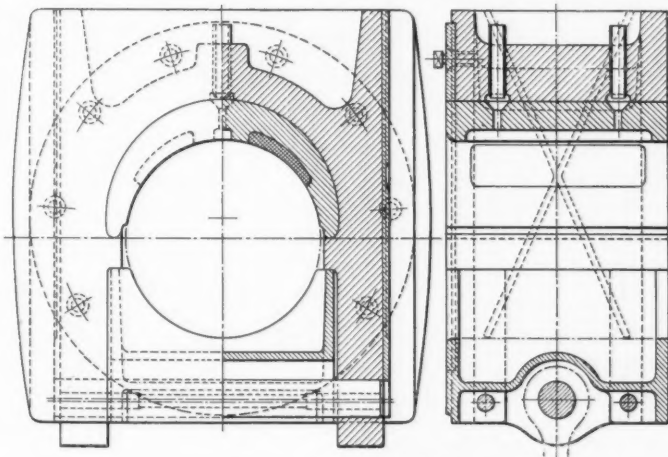


Fig. 4—Cast-steel axlebox

The keeps on most axleboxes today are of cast iron, though where a solid bronze box is chosen, the keep also may be of similar material, to present a full non-ferrous surface to the steel wheel hub face. On first class stock, the keep is furnished with a special lubricating device such as the Armstrong oiler, in which a light but strong frame of sheet metal combining suitable springs maintains a woven pad in close contact with the journal, strands hanging continually in the lubricant ensuring, by capillary attraction, that the pad always is well charged with oil. Where underhung springs are fitted, the centre hanger often is so close to the axle that the keep design is seriously affected, and it is then frequently a problem to evolve a really satisfactory design of oiler.

such wide limits that one type only is illustrated herewith.

Although the axleboxes referred to in the preceding paragraph do not receive any pounding due to the driving force, they are in precisely similar position so far as the forces transmitted from the track are concerned, and their strength must be consistent with this fact. Brakes always are applied to tender wheels, occasionally also to bogie and truck wheels, and in all such cases the length of the arc of contact between bush and axle should be increased, as compared with the bush that merely serves as a carrier.

A type of axlebox which has given marked success on the Continent as well as in this country is the Isothermos, the general features of which are shown in

Fig. 6. By skilful design, the makers are able to claim: No hot boxes where this unit is fitted; low first cost with big economies in service; 98 per cent. oil saving; oil saving *pro rata* with speed; boxes absolutely water and dust proof; reduced vehicle resistance and thus increased available power reserves (note the oil thrower for circulating oil).

This box has been applied to many diesel power units in both driving and carrying positions, in every case known to the author with good results. In view of the claim that these boxes need not be inspected more than once every twelve months to check the oil level, little more need be added except to draw attention to the special shape of the bush and its oil-ways. Fig. 7 shows this detail and the shape of the grooves; also the clearance necessary at each side of the bearing.

In countries which are subject to dust storms, axle bearings should be fully protected by special shields against the entry of grit, and in view of the continual movement by the box, and the jar which such supplementary fittings receive, too much attention cannot be paid to their design. The ideal arrangement, so far as the inner face is concerned, is some form of casing

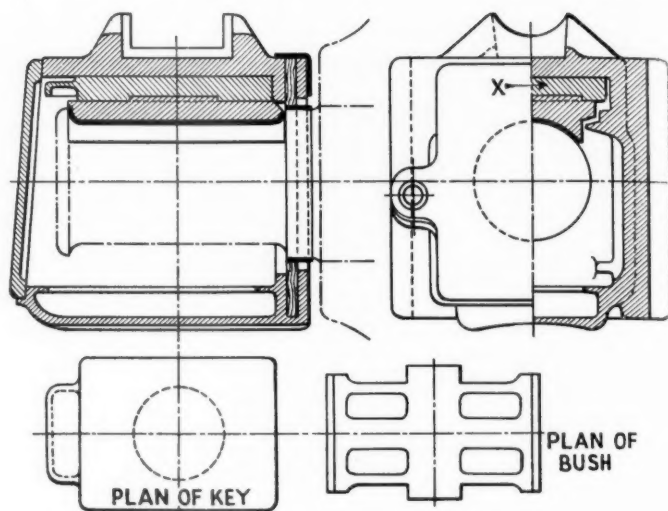


Fig. 5—Typical tender (or truck) axlebox

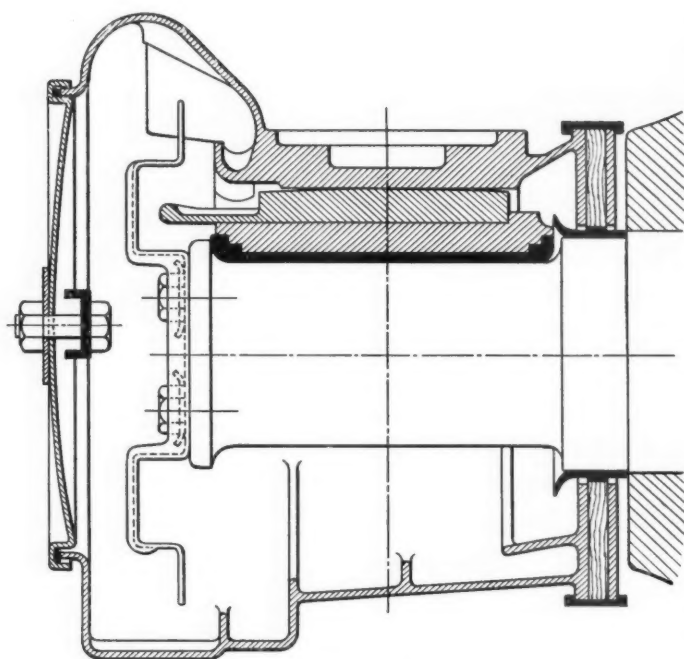


Fig. 6—Isothermos axlebox

on the lines shown in Fig. 8, with a flexible central portion to permit relative movement of the two boxes whenever required.

Two factors would appear to stand out in condemnation of the ordinary plain bearing for rail vehicle use—locomotives included—namely: Wear of axle with consequent loss of strength and ultimate expenditure due to renewals and lost time; comparatively high frictional losses.

No such bearing occurs in the axles of modern motor-vehicles; indeed, even in the earliest designs for these, only a ball or roller bearing was considered good enough, and rail unit designers are still under a handicap due largely to the prime mover being so many years ahead of an efficient ball, or roller, bearing. Where inside

bearings are necessary, as generally occurs on locomotive stock, a point that might be regarded as a major objection to the use

of the roller bearing lies in the necessity of entering the bearings and races on the axle before the wheels are pressed on, and conversely, wheels must be removed before any work can be done to the bearing if removal of the latter becomes necessary. This, however, is not a serious point, as the mileage of most of these components is well up to the million mark.

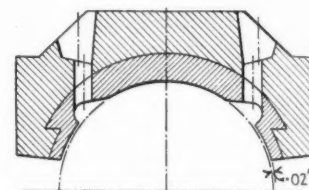


Fig. 7—Section through bush for isothermos axlebox

Several firms today specialise in this type of equipment, and a typical axlebox designed for outside bearings is shown in Fig. 9, and one designed for inside bearings in Fig. 10. Each of these boxes is a British Timken Limited design, incorporating tapered roller-bearings having full line contact with the inner and outer races, and the design is such that true rolling motion is obtained along the whole length of the rollers. Its construction ensures that the bearing shall have adequate capacity for the negotiation of the dynamic loads caused by the passage of the wheels over rail joints, crossings, and such like, in addition to the static loading of the journals. Furthermore, the tapered con-

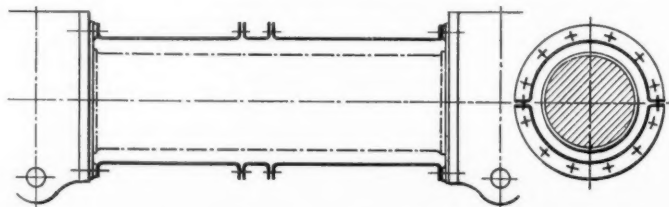


Fig. 8—Dust shield for inside axleboxes

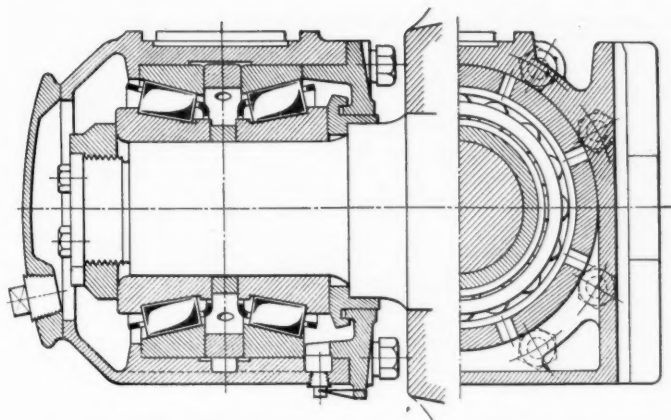


Fig. 9—Outside axlebox with British Timken taper roller bearings

struction enables the bearing to withstand the heavy thrust loads which arise when negotiating curves, and from side movements of the vehicle fitted.

The geometric basis of the bearing design is shown in Fig. 11, the essential feature being that the apices of the tapered working faces and rollers meet in a common point on the axis, and it is only when this condition is exactly fulfilled that true rolling motion is obtained. Any departure from this condition gives varying angular velocities to the roller at different points along its length, resulting in slip and skew of the rollers.

Due to the fact that the upper rollers carry only the radial loads, whereas all of them negotiate thrust loads, the standard bearing, with an included outer race angle of about 24 deg. has almost equal radial and thrust capacities. This factor is of importance in bearings for railway work, where the thrust loading is of a severe character.

The interior pressures set up in the bearing produced by external radial and thrust loads are analysed in Fig. 11. The important point to note is that thrust loads are transformed into radial loads acting at right angles to the race surfaces, and thus are carried antifrictionally on the full line contact of the tapered roller, in a similar manner to pure radial load.

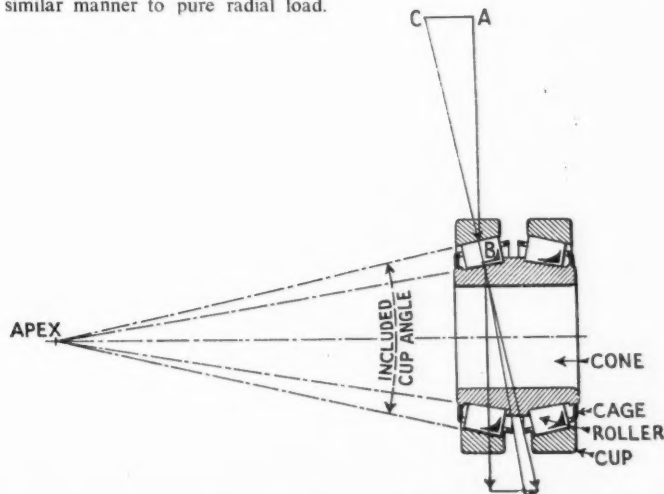


Fig. 11—Forces diagram for Timken taper roller bearings

This advantage is exclusive to the tapered roller principle.

Due to the tapered form of the rollers, any load on the bearing will produce a reaction tending to displace the rollers in the direction of their greatest diameters. This reaction forces them against a guiding rib on the inner race, and because of the conical form of this rib, the roller ends make contact with it on two small areas as shown in Fig. 12. This results in the automatic alignment of the roller with its true axis of rotation, and ensures that full live contact is maintained between it and the races. This condition holds good for both radial and thrust loading, or any combination of them. It should be clearly understood that almost the whole of the service load is carried by the rollers and their raceways, the percentage of the load carried by the guiding rib under the worst conditions never exceeding 5 per cent. of the total load. This can be seen in the diagram of forces shown below in Fig. 11.

Among the many advantages claimed by

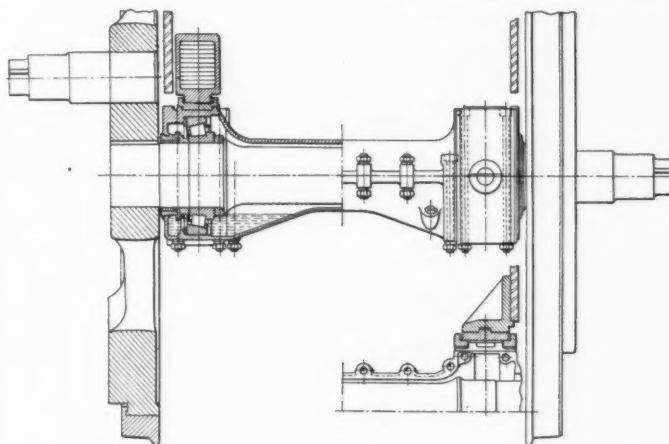


Fig. 10—Inside axlebox with British Timken taper roller bearings

British Timken Limited for its bearings are the following:—

- (1) Reduction in starting effort, and, therefore,
- (2) Saving in power consumption
- (3) Higher acceleration and greater speed
- (4) Elimination of hot boxes
- (5) Reduced maintenance charges
- (6) More comfortable travel
- (7) Reduced wear and tear of buffing and draw gear, underframes, and such like
- (8) Heavier train loads may be started in cold weather
- (9) Wear of journals eliminated and the whole axle life lengthened
- (10) Elimination of pounding in guides, due to absence of wear
- (11) No hub liners required
- (12) Axle centres maintained for life of engine (This is a big gain for coupling and connecting rods)

To ensure an equally long life for the axlebox as for the roller bearings, the



Fig. 12—Showing the end loading on Timken roller



box faces to the guides usually are lined with 3 per cent. manganese steel plate, welded or screwed to the box, and afterwards finished by grinding to gauge.

Reference was made earlier in these notes to the fact that an axlebox which works in guides must be free to take up a position inclined to the frame structure; this requirement often occurs when the engine enters a curve at speed, and unless the boxes are easy in the guides, broken flanges may occur. On narrow-gauge stock this is particularly important, and proof may be obtained readily by drawing the boxes in the guides (in end view) with one box 1 in. above its normal position and its fellow 1 in. below the normal. One way out is to bevel the flanges as shown in Fig. 13, but the better method is that adopted by British Timken Limited and shown in Fig. 14. In this the guiding flanges hold to the hornblocks for their full length, the axlebox only swinging on trunnions to any required inclination.

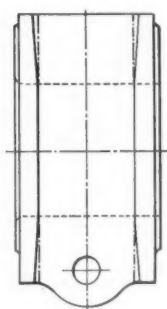


Fig. 13—Flanges with bevel

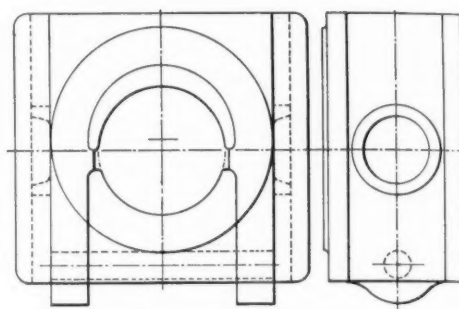


Fig. 14—Method adopted by British Timken Limited

The future development of the axlebox at the present stage would seem to lie between the two types, but many engineers

will have noticed the distinct encroachment which the roller bearing already has made on this field.

## Improving Piccadilly Line Signalling

*Speed control signalling is to be installed by London Transport between Green Park and Kings Cross to provide minimum headway with increased station stops*

THE growth of passenger traffic on the Piccadilly Line of London Transport has been so great that considerable difficulty is being experienced in maintaining a satisfactory service. To do so with the normal form of signalling met with on the line, a station stop should not exceed 30 sec., but stops of much greater length are being experienced at the present time, particularly between Green Park and Kings Cross, and some measure of relief has become urgently necessary.

When a train remains for an unduly long time at a station, the following one becomes stopped at the home signal; and when eventually the first train is able to leave and pass out of the platform, so clearing the signals behind it, inevitably some time is lost by the second train, which must re-start and draw forward into the station. The delay so caused rapidly spreads over several stations.

### Function of the System

To remedy this situation it has been decided to provide a system of speed control signalling between the stations above named, the function of which is, when a train stops for an extra long time in a platform, to check the speed of the following one in such a manner that, if it has been reduced correctly by the motorman, the train can be brought closer in to the station. This enables it to keep rolling forward, instead of coming to a stop. Then, as soon as the train waiting in the station starts and moves out of the way, the following one is able to follow in without loss of time. With this arrangement it is possible to run trains at 1½-min. intervals with station stops of 48 sec. instead of 30 sec.

The diagram on page 659, taken from one supplied by the London Transport Executive, shows the section of north-bound track between Holborn and Russell Square, and illustrates the effect of the new speed signalling on the progress of the trains. There are five home signals at Russell Square, and what is known as a "blind" train-stop in the platform—that is, a train-stop without any signal immediately adjacent to it. Signal A is fixed at full safety distance from the station for

the normal speed, that is, for the train-stop to be effective at that speed. Signal C, however, provides the reduced safety distance, applicable at the lower speed obtaining after a train has been checked by the detection apparatus.

At a certain distance in rear of signal A there are speed-restriction signs imposing limits of 25 and 20 m.p.h., but when there is no train in the platform, the signals stand "clear" in the normal way and these signs are not lighted up. A train can run up to the station at normal full speed and pull up there in the ordinary manner. While it is standing at the platform, signals A, B, C, D, and E, all show a red light behind it, and the speed restriction signs are illuminated. On sighting the first one, imposing the 25-m.p.h. limit, the motorman of a following train approaching Russell Square reduces speed.

At the first sign there is a short track-circuit section connected to a time-element relay. If the train travels over this at a speed less than 25 m.p.h., as timed by the relay, signal A will clear and, of course, the train-stop working with it. The motorman has then to reduce the speed of his train to below 20 m.p.h. at the second restriction sign, where there is another timing section. If he does this correctly, signal B will change to green and allow the train to come up to signal C. If the train in front starts to move out at this moment, signals C, D, and E, will be cleared in turn by the track-circuit sections in the platform and in the vicinity of the starting signal becoming clear.

### Purpose of "Blind" Train-Stop

The train-stop F is in effect another signal, but one at which no train should have to stop except in an emergency. It always has been regarded as undesirable to provide a signal in a platform length, as a train could be stopped half in and half out of a station. Care has been taken therefore so to locate this "blind" train-stop that, under normal conditions a train never would be required to stop at it, and therefore never would be "tripped" there.

It is necessary, however, to cover the emergency condition of an outgoing train

being stopped suddenly for some special reason before it has travelled a safe distance past the starting signal. Should this occur, an incoming train would be tripped by the train-stop and brought to a stand before approaching dangerously close to the train ahead stopped out of course.

### Time-Distance Curve

A time-distance curve showing the running of two trains is given on the diagram, which is read from the bottom upwards. The first train is shown as leaving the platform after an assumed long stop there, and the progress of the following train is depicted also. It reaches a maximum speed, after leaving Holborn, of 29.5 m.p.h., and this is reduced first to 25, then to 20 m.p.h., at which latter rate it runs into the platform, where, after the performing of the station duties, it starts up and travels away. The clearing points and overlaps of the signals are shown, with the speed, and it will be seen that at the reduced figure of 20 m.p.h. a safety margin is left in every case.

### Fixed Time-Element Relay Setting

A particular feature of the London Transport installations of speed signalling is that the setting of the time-element relays is fixed at 4½ sec., the distance over which the train has to run being varied to give the speed value required. This has the important and very valuable result that a relay can be changed without risk of a wrong time setting being substituted for the correct figure.

The work on the Piccadilly Line, which will be the second such installation for headway purposes on London Transport lines, the first having been brought into operation recently at Liverpool Street, Central Line, will entail moving all existing station home signals. The additional relays and equipment will necessitate the present relay rooms being enlarged, as well as the cable runs at the station ends.

CANADIAN PACIFIC STEAMSHIPS.—The various departments of Canadian Pacific Steamships Limited are to be moved shortly from the present headquarters at 8, Waterloo Place, London, S.W.1, to the Royal Liver Building, Pier Head, Liverpool. Passages in the ships will continue to be booked in London at the offices of the Canadian Pacific Railway.

## Traffic Conditions in Austria

*High proportion of international travellers*

TRAFFIC on the Austrian Federal Railways is recovering only slowly. Fast trains continue to be subject to considerable delays, and most of the carriages used for stopping or local trains are not lighted during the night, and broken window panes are still replaced by boarding. Passenger traffic on the whole system, in train-kilometres, increased in 1947 by only 1.4 per cent. over 1946. Displaced persons on the move constitute a considerable proportion of railway travellers in the western zones. A recent census carried out at Innsbruck showed that non-Austrians constituted 73 per cent. of the total number of passengers interviewed. It must be borne in mind, however, that Innsbruck is a stopping place of the "Arlberg Express" conveying passengers between the West of Europe and Czechoslovakia, Poland, Hungary, and south-eastern countries. There is international traffic between Innsbruck and the south via the Brenner line.

The coal crisis has been partly responsible for scanty train services and bad running. The position is somewhat better on the electrified lines, particularly on the west-east artery between Buchs (and Bregenz), Innsbruck, Salzburg, and Attnang-Puchheim. Electrification of the Attnang-Puchheim-Vienna section is in hand, but making slow progress because of shortage of materials and labour. In the British-occupied zone, the electrification of the Villach-Spittal-Millstättersee section, 22.3 miles long, of the Salzburg-Innsbruck main line is expected to be completed in the current year.

The increase in goods tonnes-kilometres in 1947 amounted to 48.1 per cent. over 1946. The problem of goods wagons "disappearing" in the eastern areas and beyond has been a source of anxiety for the railway administration because Austria cannot afford to lose part of her rolling stock even temporarily.

While total working receipts for 1948 are expected to increase by more than 90 per cent. over 1947, the rise in passenger receipts has been estimated at only about 50 per cent., while the increase in goods receipts is foreseen at more than 200 per cent. Capital expenditure on rolling stock will be more generous in 1948, but the outlay for electrification, though some 15 per cent. larger than was provided in 1947, denotes the slow pace at which conversion is to proceed.

**DREWRY DIESELS FOR HOME AND OVERSEAS SERVICE.**—May shipments by the Drewry Car Co. Ltd., River Plate House, Finsbury Circus, London, E.C.2, include a second diesel unit of 200 h.p. for North Africa and a similar locomotive for the Ohai Railway Board, New Zealand. Recent locomotive deliveries for service in Great Britain include 150-h.p. units for the Liverpool Gas Company and the Barking Jetty Company and 200-h.p. units for the Northern Aluminium Company and British Railways. A description of the latter type, which has the 0-6-0 wheel arrangement and weighs 29-30 tons in working order, was given in *Diesel Railway Traction* for May, 1948, the article in question referring to the diesel mechanical unit built for the Drewry Car Company by the Vulcan Foundry Limited for use in the North Eastern Region of British Railways.

## Improving Piccadilly Line Signalling

(See article on opposite page)

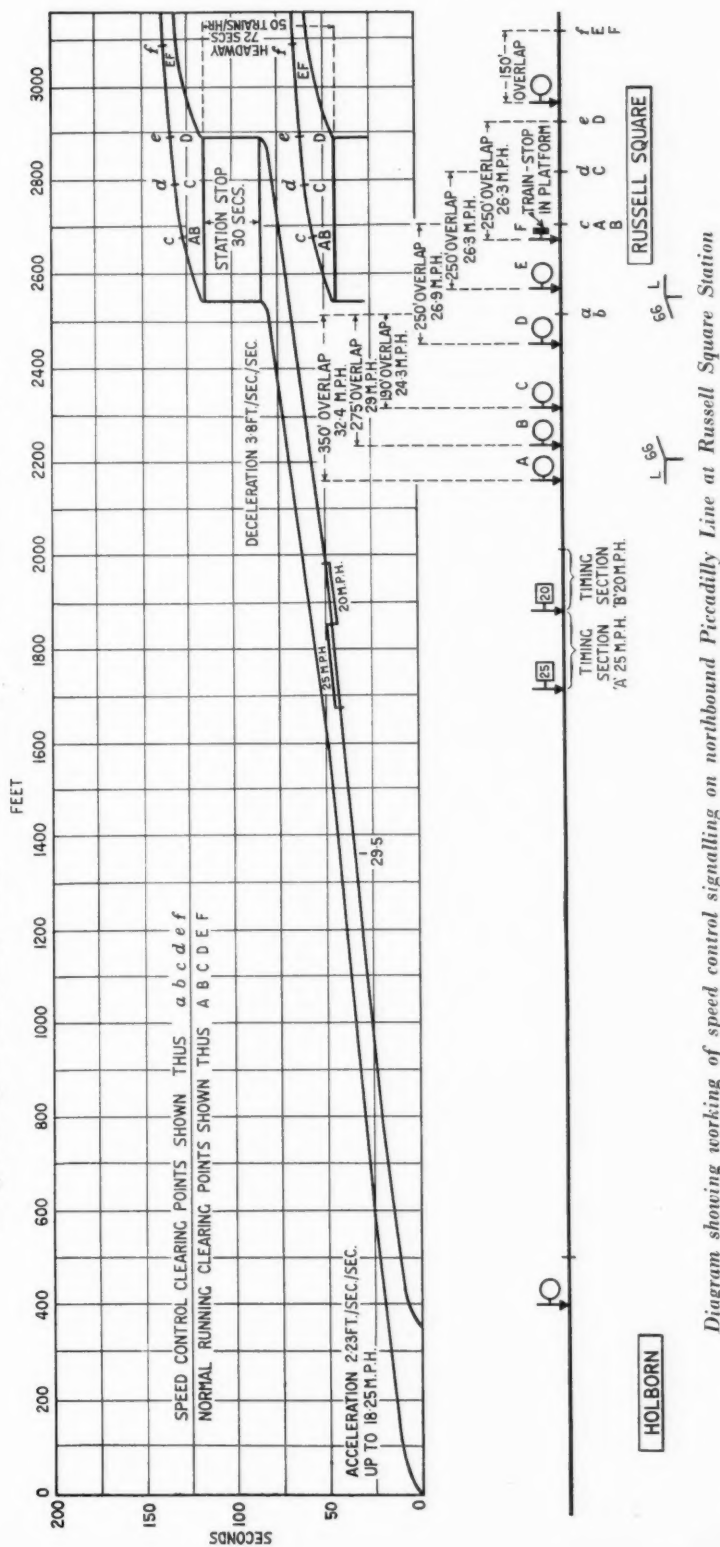


Diagram showing working of speed control signalling on northbound Piccadilly Line at Russell Square Station

HOLBORN

## Inauguration of the Northern Transandine Railway

*Substantial economies in distance between the principal cities of Argentina and the Pacific coast of Chile*

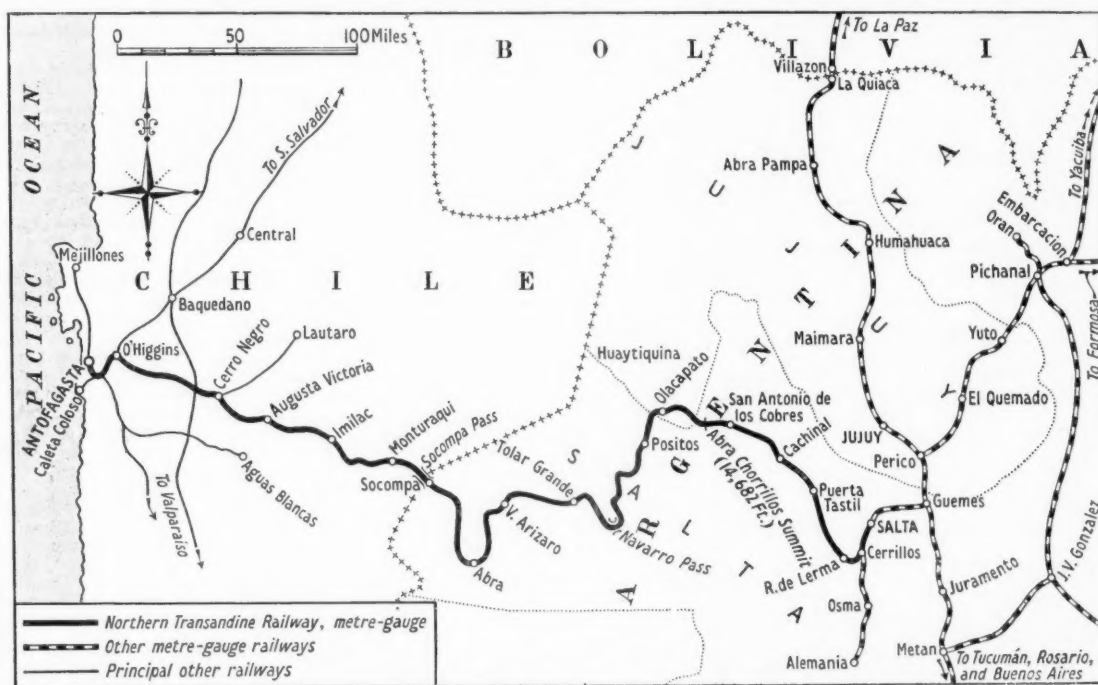
**C**IRCUMSTANCES prevented the Presidents of Argentina and Chile from being present at the official inauguration on February 20 of the new Northern Transandine Railway between Salta (Argentina) and Antofagasta (Chile), as had been intended. On the Chilean side, the line had been completed up to the Argentine frontier on January 16 in the presence of the Chilean Minister of Communications, Sr. Ernesto Merino. On the Argentine side, a special delegation composed of the Minister of Public Works, General Juan Pistarini (representing the President of the Republic); Engineer Guido Belzoni (representing the General Manager of the State Railways, Colonel Alfredo J. Job, who was unable to be present owing to ill-health); the Governor of the Province of Salta; and other

vinces of Argentina with the Chilean port of Antofagasta dates from 1905, when the Argentine Congress passed a Law authorising the necessary studies and surveys to be made. Two years later another Law was passed, authorising Sr. Emilio Carrasco to build and operate the railway providing he obtained from the Chilean Government the necessary permission for a connecting line on the other side of the frontier. However, Sr. Carrasco was unable to fulfil his part of the bargain, and the concession was declared null and void.

Nothing further of importance happened until 1921, when President Hipólito Irigoyen's Government issued a Decree authorising the construction of the first section, from Rosario de Lerma to Gólgota (now Damián Torino). In 1922

required very careful surveys being made from the first, and the original plan provided for connection with the Chilean system through the pass of Huaytiquina, the railway being known for some time as the Huaytiquina Railway. However, later surveys led the engineers to decide on the Socompa route as offering less difficulty, in that grades could be kept within the limit of adhesion locomotives, obviating the necessity for rack sections; and fewer sharp curves were required.

The new railway is of metre gauge and is 560 miles long. The distance from Salta to Socompa is 355 miles and from Socompa to Antofagasta, 205 miles. The maximum grade is 1 in 40 in the Rosario de Lerma-Abra Chorrillos section, and 1 in 50 elsewhere. Rails of 37 kg. per m. have been used throughout, and every kilometre of track required 1,500 sleepers of quebracho. Numerous viaducts, tunnels, bridges, cuttings, embankments, and other works have had to be constructed. The most important of the former is the Polvorilla Viaduct, 738 ft. in length, built



*The new route from Argentina to Chile, with connecting railways. From Augusta Victoria to Antofagasta the route is over the British-owned Antofagasta (Chili) & Bolivia Railway*

officials, made the inaugural journey in a special train from Salta to Socompa, on the Argentina-Chile frontier, arriving there on the morning of February 20.

The actual inauguration ceremony was very simple, and consisted of speeches by Engineer Belzoni; Dr. Cornejo Linares, Governor of the Province of Salta; and the Mayor of Antofagasta, Sr. Juan de Dios Carbone, all of whom stressed the importance of the new railway and the benefits it was hoped to obtain from it. Finally, the Minister of Public Works, General Pistarini, in the name of President Perón, declared the line open, pointing out in his speech that February 20, 1948, marked a new step towards the ideals of continental friendship and solidarity.

The idea of a Transandine railway which would connect the northern pro-

a treaty was signed with Chile by virtue of which each country undertook to construct that part of the line which lay in its own territory.

Eleven years later, Congress voted a sum of ps. 40 million for the completion of the railway, which sum, however, was found to be insufficient. For this reason a Decree was issued in 1941 authorising the State Railways to complete the Argentine section within 5 years, and appropriating the sum of ps. 6½ million a year for that purpose. Nevertheless, it was not until President Perón took over the reins of government that the work of construction was undertaken with the necessary vigour, the termination of the line being included in the Argentine Government's Five-Year Plan.

The mountainous nature of the country

on a curve of 656-ft. radius and a gradient of 1 in 62.5. The viaduct is built totally of steel, the weight of steelwork being 1,592 tons. Twenty-three tunnels have been built on the Argentine side, of which the longest is 551 yd. There are two "zig-zags" and two "spirals," these being indispensable for the line to attain the necessary height. The highest point is Abra Chorrillos, at 14,682 ft. above sea-level. The opening of the new route brings the port of Antofagasta to 560 miles from Salta, 769 miles from Tucumán, 1,373 miles from Rosario, and 1,556 miles from Buenos Aires. A number of station and other buildings remains to be constructed.

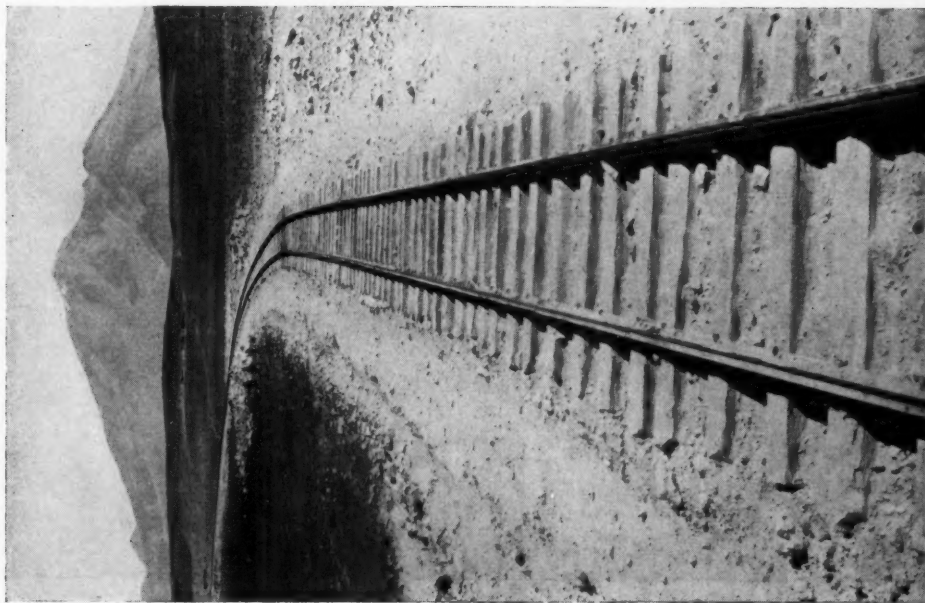
The new railway provides an outlet for the produce of the northern provinces of

(Continued on page 666)



# New Transandine Railway Linking Argentina with Chile

(See article opposite)



Section of line near the Argentina-Chile frontier station of Socompa, with Socompa volcano in background

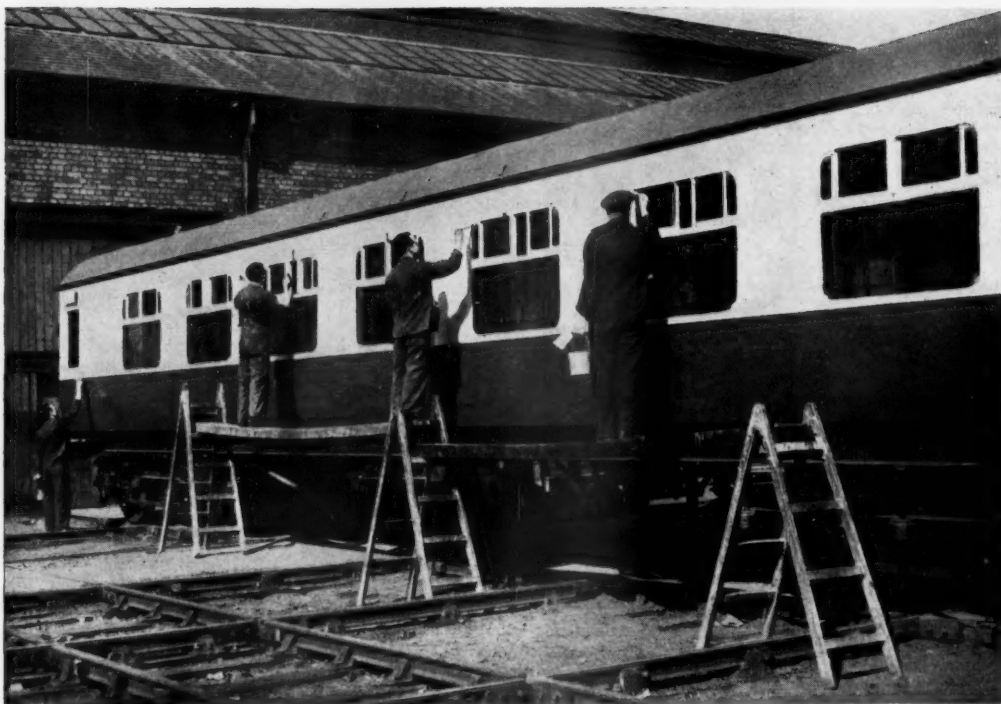


Construction train at Chuculaqui, 58.7 km. east of Socompa



Typical country traversed by the line in Argentina near the Chilean frontier, showing embankment under construction in foreground

## British Railways Experimental Liveries



*A main-line coach at the London Midland Region Derby Works, where it is being painted chocolate and cream; subsequently black and golden yellow lining is added*



*Scene outside Derby Works, showing express passenger engine No. 45565 in the green livery with red, cream, and grey lining*

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## RAILWAY NEWS SECTION

## PERSONAL

Mr. T. W. Royle, C.V.O., M.B.E., Deputy Chief Regional Officer of the Railway Executive London Midland Region, has decided to retire from British Railways in the near future.

Mr. Warren Storey has retired from the position of Electrical Engineer to the Irish Transport Company (C.I.E.).

Mr. T. L. C. Strange, an Area Traffic Superintendent of Ribble Motor Services Limited, has been appointed Traffic Manager of Western Welsh Omnibus Co. Ltd, in succession to Mr. T. G. Davies, appointed General Manager of Rhondda Transport Co. Ltd.

Dr. W. J. Worboys has been appointed an additional Director of Imperial Chemical Industries Limited, and will take charge of the paints, plastics, and leather-cloth group. Dr. Worboys, hitherto Chairman of I.C.I. Plastics Division, has been succeeded in that appointment by Mr. P. C. Allen.

General Sir William Slim, Member of the Railway Executive, is among the members of the National Advisory Council for Industry & Commerce appointed by the Minister of Education.

Mr. James Maxwell (General Manager of Thos. Cook & Son Ltd.) has been appointed Chairman of the London committee of the Scottish Council (Development & Industry).

Mr. A. F. Andrews, Schedules Superintendent (Road Transport), London Transport Executive, has retired, on account of ill health, after 42 years' service. He has been Schedules Superintendent (Road Transport) since 1939. Mr. Andrews is succeeded by Mr. C. J. Mays.

## COLONIAL RAILWAY APPOINTMENTS

The Secretary of State for the Colonies recently approved the following appointments:—

Mr. R. C. Wickham, Senior Locomotive Superintendent, Gold Coast Government Railway, to be Chief Mechanical Engineer, Sierra Leone Government Railway.

Mr. A. F. Lucarotti to be Assistant Engineer, Tanganyika Government Railways.

Mr. A. J. S. Blanchfield to be Assistant Engineer, Tanganyika Government Railways.

Mr. C. W. Leverett, District Traffic Superintendent, Palestine Railways, to be District Traffic Superintendent, Kenya & Uganda Railways & Harbours.

Mr. Hugh Dalton, M.P., has been appointed Chancellor of the Duchy of Lancaster, in succession to Lord Pakenham, who becomes Minister of Civil Aviation on the resignation of Lord Nathan to return to his professional work as a solicitor. Mr. Dalton will be a member of the Cabinet; he will help in the general work of the Cabinet and be available for any special duties which the Prime Minister may allot to him. He will not take over the special responsibility for German affairs which Lord Pakenham has had; the arrangements for helping Mr. Bevin with that work are under consideration. Co-ordination of economic affairs will remain in the hands of Sir Stafford Cripps.

H.E. Abdul Megead Pasha Badr, who, as recorded in our January 23 issue, has been appointed General Manager of the Egyptian State Railways, is an engineer. Among other appointments, he has held those of Technical Secretary to the Minister of Communications, and Technical Adviser to the Ministry of War. Abdul Megead Pasha was afterwards called on to hold the post of Minister of Social Affairs, and then that of Minister of Finance, and from the latter has recently been made General Manager of the Egyptian State Railways.

Donald Murray (Executive Officer (Mineral Traffic), Railway Executive), G. F. Sinclair (Chief Technical Planning & Supplies Officer, London Transport Executive) (former Member of Council), P. J. R. Tapp (Chairman, Meat Transport Organisation Limited; Member (part time), Road Transport Executive), J. V. Wood (Managing Director, British European Airways); and one Associate Member: Mr. Ernest Havers (Assistant Development Agent, Commercial Superintendent's Office, Western Region, British Railways).



H.E. Abdul Megead Pasha Badr

Appointed General Manager, Egyptian State Railways

## INSTITUTE OF TRANSPORT

The undernamed have been elected by the Council of the Institute of Transport to hold office for the year commencing on October 1, 1948:—President: Mr. D. R. Lamb; Vice-Presidents: Mr. R. Davidson, Sir Harold Hartley, Mr. V. A. M. Robertson, Mr. A. B. B. Valentine, Mr. J. S. Wills; Honorary Treasurer: Mr. S. Kennedy; Honorary Librarian: Mr. C. T. Brunner; Honorary Solicitors: Joynson-Hicks & Company; Past-Presidents to serve on the Council: Mr. R. Kelso, Mr. J. S. Nicholl, Sir Frederick Handley Page, Mr. R. Stuart Pilcher, Mr. T. W. Royle, Sir William Wood.

The undernamed Ordinary Members of Council will retire at September 30, 1948:—Nine Members: Messrs. J. W. S. Branker, T. F. Cameron, H. T. Duffield, W. S. Graff-Baker, D. H. Handover, S. G. Hearn, R. J. Hodges, C. Jackson, R. O. Squarey; one Associate Member: Mr. A. Watson. To fill the vacancies created by the foregoing retirements the Council has nominated the undernamed:—Nine Members: Sir Alan J. Cobham (Managing Director, Flight Refuelling Limited), Messrs. R. G. Grout (Director & Secretary, General Steam Navigation Co. Ltd.), R. H. Hacker (Chief Officer (Continental), Railway Executive), R. G. James (General Manager, East Kent Road Car Co. Ltd.), A. G. Marsden (Transport Adviser to the board of Lever Bros. & Unilever Ltd.),

Mr. C. A. Haygreen, Assistant to Cartage Manager, North Eastern Region, British Railways, York, has been appointed Assistant District Passenger Manager, York.

We regret to record the death on May 31 last of Mr. G. H. Sheffield, Managing Director of G. H. Sheffield & Co. (Engineers) Ltd.

Mr. W. J. Sawkins, Chief Accountant of the former Southern Railway, and since January 1 last of the Southern Region, British Railways, who retired on March 31, has had nearly 50 years railway service, of which the first half was on small railways. He commenced his career in 1898 with a joint committee working three small railways in Warwickshire and Northamptonshire, which in 1908 were amalgamated as the Stratford-upon-Avon & Midland Junction Railway; shortly afterwards the Northampton & Banbury Junction Railway was also taken over. Mr. Sawkins thus had early experience of amalgamation in a minor degree. In 1911 he transferred to the Isle of Wight Central Railway as Assistant Secretary & Accountant, and in 1920 was appointed Secretary & Accountant, having, in 1916, been appointed also Secretary & Accountant of the Sheffield District Railway. As he was still acting in an advisory capacity to the Stratford Railway, he had the unusual experience at the



1923 amalgamation of being concerned in agreeing absorption terms with three out of the four group companies. In that year Mr. Sawkins was appointed Statistical Assistant to the Accountant, Southern Railway, and later Assistant Accountant (Statistics), and instituted the Statistical Office. In 1927 he was appointed Assistant Accountant, holding that position until April, 1946, when he became Chief Accountant. From the inauguration of the Southern Railway Superannuation Fund he was Secretary, until he became Chief Accountant, and a directors' committeeman of the fund; the fund originated the joint annuity scheme which has proved very popular with its members and was adopted by the funds of the other main-line companies and of the R.C.H. He was also Chairman of a Workshop and Economy Committee set up before the recent war to report on all the Southern Railway Locomotive Engineers', Docks & Marine, etc., Workshops. Mr. Sawkins recalls how, on small railways, at the time his career commenced, officers were often called on to perform any duties that were necessary; and he was required on certain occasions to act in emergencies as station-master, ticket collector, booking clerk, guard, signalman, and in many other capacities.

Mr. M. G. Burrows, A.M.I.Mech.E., M.I.Loco.E., Assistant Works Superintendent, Locomotive Works, Derby, London Midland Region, British Railways, who, as recorded in our April 30 issue, has been appointed Assistant (Locomotives) to Chief Mechanical Engineer, Southern Region, was educated at Lancing College. He joined the Great Western Railway as a premium apprentice in 1920, and later obtained experience in the test room before being appointed to the drawing office in 1926. He joined the L.M.S.R. in 1935 as a Technical Assistant on the headquarters staff of the Chief Mechanical Engineer, and later in the same year was appointed Mechanical Inspector on the same staff. In 1938 he became Assistant to Works Superintendent, Horwich Locomotive Works, where he was made Assistant Works Superintendent in 1942. From 1944 to 1946 he was Acting Assistant Works



**Mr. W. J. Sawkins**

Chief Accountant, Southern Railway, and Southern Region, British Railways, 1946-48

Superintendent at Crewe, and he was appointed Assistant Works Superintendent, Locomotive Works, Derby, in 1946.

Mr. I. C. Forsyth, M.I.Loco.E., Assistant Works Superintendent, Crewe Locomotive Works, London Midland Region, British Railways, who has been appointed Works Manager at the same works, was awarded Sir Henry Fowler's Prize and Scholarship in 1916 and received his training at the Derby Locomotive Works and Derby Technical College as a privilege apprentice. After a period in H.M. Forces, he returned to complete his training at Derby Works until 1922, when, after some experience at Nottingham Motive Power Depot, he became Running Shed Foreman at Lincoln. In 1925 Mr. Forsyth was appointed Assistant to District Locomotive Superintendent, Saltley, and in 1928 was transferred in a similar capacity to Preston. In 1934 he became Assistant Dis-

trict Locomotive Superintendent in charge of the Motive Power Depots at Blackpool, and in the next year was appointed General Assistant, and later Utilisation Assistant (Motive Power), to the Divisional Superintendent of Operation, Manchester. He became Maintenance Assistant (Motive Power) to the Divisional Superintendent of Operation, Crewe, in 1940, and in 1943 was appointed District Locomotive Superintendent, Plaistow. He was made Assistant, Office of Superintendent of Motive Power, H.Q., L.M.S.R., in 1945, and in 1946 was appointed Assistant Works Superintendent, Crewe Locomotive Works. Mr. Forsyth, who is a former Chairman of the Manchester Centre of the Institution of Locomotive Engineers, has been re-elected Chairman for the current year.

Mr. J. W. J. Webb, B.Com., who has been appointed Assistant to Chief Financial Officer (Expenditure Matters), Railway Executive, entered the service of the Great Western Railway in the Traffic Department at Kings Sutton in December, 1919, and was transferred to the Chief Accountant's Office a few months later. In 1925 he was selected for the special training scheme, and, after gaining wide experience in the Traffic, Goods, Road Transport and Docks Departments, he returned to the Chief Accountant's Office in 1929. In the next few years he was mainly engaged in duties connected with inter-company expenditure matters, including pooling and co-ordination schemes. From August, 1933, to March, 1936, he was also Secretary to the committee of accountants appointed to inaugurate the London Passenger Pooling Scheme. In February, 1939, he was appointed an Assistant in the Chief Accountant's Office, and in February, 1940, became Assistant to the Chief Accountant, which position he now vacates. Throughout the period of Government control he was a member of several sub-committees of the Accountants' Committee dealing with matters arising out of the Railway Control Agreement. After a course of study at the London School of Economics, Mr. Webb obtained the B.Com. degree of London University in 1927, specialising in inland transport subjects in the final examination.



**Mr. M. G. Burrows**

Appointed Assistant (Locomotives) to C.M.E., Southern Region, British Railways



**Mr. I. C. Forsyth**

Appointed Locomotive Works Manager, Crewe, London Midland Region, British Railways



**Mr. J. W. J. Webb**

Appointed Assistant to Chief Financial Officer (Expenditure Matters), Railway Executive

## Institution of Locomotive Engineers' Annual Luncheon

*Sir John Calder on the value of contacts in the Crown Colonies*

The annual luncheon of the Institution of Locomotive Engineers was held at the Dorchester Hotel, London, W.1, on Friday, May 28. Mr. Julian S. Tritton, President of the Institution, was in the chair. The principal guest was Sir John A. Calder, the Senior Crown Agent for the Colonies.

Mr. Harold Rudgard, President-Elect of the Institution, in proposing the toast of the guests, said that the Institution had always been very proud of the number and quality of the guests which attended its functions. Locomotive engineers as a rule were a very friendly species, and even if their virtues might not be as good or as high as those of their friends, they were always very close to their friends. They were a group of men much given to trust, and they themselves could be trusted. If there was more trust in the world it would be a better place. A gathering such as that now being held did nothing but good.

Sir John A. Calder, who responded to the toast, said that Mr. Rudgard was one of those who quite recently, owing to legislation, had found himself transformed overnight from an efficient business man into a hidebound bureaucrat. He was now a creature without enterprise or initiative, completely tied up with red tape. As one who had spent many years in the Civil Service he extended fraternal greetings.

This was the first occasion on which a representative of the humble Crown Colonies had been asked to respond to a toast which included representatives of the Dominions. This opportunity made it possible to emphasise the many links between the Crown Colonies and the Institution of Locomotive Engineers. This Institution had representatives all over the world, and many of them in the Crown Colonies. There could be no question of the great value and benefits which resulted from membership of the Institution, not only from the point of view of the contacts which resulted from it, but also because of the information which was made available to members through the *Journal*. He had always heard very high praise of the Institution from its members, and he would add that some 20 or 30 of his own staff were members of the Institution, including Mr. W. L. Watson, his Engineer-in-Chief, who was a Vice-President of the Institution.

Mr. V. M. Barrington-Ward, Member of the Railway Executive, in proposing the toast of the Institution, said that he would like to correct any impression that the railway administration was bound up in red tape. It was having a good many troubles, but it would get over them, and it was in no way a Civil Service organisation.

He paid tribute, as one responsible for operation, for many kindnesses received from locomotive engineers. An operator had to have the closest contacts with the designer and builder of locomotives. It would have been a poor railway service without men of the calibre of Gresley and Stanier. On the other side, he would like to pay tribute to the motive power officers, whose good work was too often unrecognised, although it was the key to the day-to-day success of railway operation. He believed that they were an integral part of railway administration, and he was no party to the practice which had grown up recently whereby these officers were made subordinate to a non-technical service. He

thought it would be better to follow the dictates of Cecil Paget, who 40 years ago had laid down the principles of successful railway operation.

He wished to pay tribute to Colonel Rudgard for his outstanding motive power work. His energy and drive were known to them all, and he would do much to ensure that in time there was in this country a service which was second to none.

He was sure that the Institution would further the best traditions of a very great profession.

Mr. Julian Tritton, replying to the toast, said that among the duties of the President was that of best representing the interests of the Institution to many different kinds of people. He had been fortunate in being able to do this in two tours, one to America and Canada, and the other to India, Pakistan, and Burma, which he had undertaken during his period of office. He believed that he was the first President to have delivered the presidential address while abroad; when he made it, at Delhi, he had been pleased to see that the attendance was as large as it might have been at home. He hoped he would not become known as the "Absentee President." He would prefer that he should be looked on as a "Locomotive Ambassador Extraordinary."

In the last 12 months politics had changed the lives of many locomotive engineers. He went on to quote, amid laughter, two statements made by the then Minister of Transport at the Institution's annual luncheon in 1940. The first of these was to the effect that in peacetime the Government had no managerial function, and that no one knew better than the Minister that Governments could not run railways. The second was to the effect that the Government was only too glad to leave the management of railways to those who had been brought up to it, and who should be left to do the managing.

The President added that he was one of those, who, rightly or wrongly, believed that the people got the Government they deserved, and that if our Government did not serve us well, it served us right.

At the conclusion of the President's speech he presented the recently instituted bronze medal of the Institution to Colonel Graham for outstanding services.

Among those present were:—

Messrs. N. Ablett, F. W. Abraham, E. Adams, W. A. Agnew, G. Aziz Ahmed, J. T. Aldridge, L. B. Alexander, W. P. Allen, A. J. Allenby, H. H. Andrews, R. Arbutnot, J. C. Armstrong, S. V. Arnold, G. Arnott, W. J. Ash, E. S. Aslett, J. T. Asquith, R. M. Atkinson.

Messrs. G. H. Bailey, E. W. Baker, F. J. Bance, D. Barrie, V. M. Barrington-Ward, R. Bate, A. H. Baughan, L. Barker, A. E. Beacham, F. H. Beasant, R. A. Beckett, J. E. Beckett, A. E. Bennett, H. Bennett, J. P. Bennett, A. J. Beedham, A. R. Bell, Brigadier J. A. Bell, Messrs. B. Bercovitz, G. F. E. Best, P. G. Bhagat, Colonel F. J. Biddulph, Messrs. H. Billington, G. H. Binnie, Sir George Binney, Messrs. C. Bollard, R. C. Bond, A. J. Boyd, Sir Leslie Boyce, Messrs. E. Brearley, K. Bridges, G. C. Brighten, W. Brooke, D. F. Brown, A. E. Bryan, D. C. Burton, M. G. Burrows, Dr. Buchan, Mr. A. J. Bunning.

Mr. N. G. Cadman, Sir John A. Calder, Messrs. J. Calderwood, A. Campbell, Colonel K. Cantlie, Messrs. A. E. Cannon, D. Cardew, D. H. Cardew, A. J. Carling, H. R. Carver, J. Cave, H. D. Chamberlain, M. R. Chapman, E. K. Charney, J. H. Chrystal, C. W. Clarke,

H. Clark, C. S. Cocks, C. M. Cock, K. Cole, Commander A. Coleman, Mr. A. F. Collins, Lt.-Colonel F. R. Collins, Messrs. W. J. J. W. Collins, J. N. Compton, N. H. Cook, B. W. C. Cooke, D. F. Cooper, R. S. Cooper, T. Cooper, J. C. G. Cossey, C. G. Cotesworth, H. P. R. Coveney, E. S. Cox, M. A. Crane, A. E. Crook, J. Crook, R. Curl, J. B. Curry.

Messrs. A. C. C. Damant, A. S. Davidson, F. H. Davies, H. Davies, A. L. B. Dawson, Damer Dawson, A. J. Day, H. E. Deane, C. E. Dee, W. Degenhardt, E. L. Diamond, F. Dickson, L. J. Dockerell, V. H. Drewry, R. J. Drury, J. W. Duggan, R. G. Duncan, F. L. Dunster, L. B. Edwards, J. Elliot, F. Ellis, Colonel G. Embleton, Colonel R. B. Emerson, Messrs. E. L. M. Emtage, C. A. Fairchild, K. C. Fandell, W. Featherstone, N. Fielding, R. Flack, L. Flatt, R. E. Fordham, R. Freeman.

Mr. H. Gadd, Commander H. V. Gaud, Messrs. H. F. S. Gedge, A. J. Gibson, R. K. Glascoine, A. Gloster, C. T. Godfrey, G. E. Godfrey, K. M. Goodenough, W. S. Graff-Baker, E. Graham, R. C. Gibb, E. W. Greaves, H. M. K. Greenwood, T. Greenwood, J. H. Gresham, S. R. Gresham, R. Gresley, A. Griffiths, H. W. Griffiths, J. R. Grimsdell.

Messrs. D. W. Hadfield, J. Hadfield, D. S. Hadley, T. O. M. Halliday, R. H. Hamilton-Wickes, P. L. J. Hands, D. M. Hannah, E. W. Hanslip, F. D. M. Harding, L. A. Harding, F. A. Harper, G. Harrison, J. F. Harrison, H. A. Harrison, R. Hart-Davies, R. F. Harvey, R. J. Harvey, C. A. F. Hastilow, M. S. Hatchell, C. G. Hatherley, C. V. Havord, G. N. Healey, A. Henderson, L. B. Henderson, N. B. Henderson, F. A. Hewson, P. R. Hickman, H. W. Hobbs, R. B. Hoff, H. Holcroft, J. E. Hollingbery, H. H. Holloway, C. P. Hopkins, W. G. Hornett, W. C. Hoskin, F. A. Howard, Mr. Howe, Mr. P. R. Howell, Colonel R. G. Hughiff, Messrs. J. Hunter, N. Hutchinson.

Messrs. A. C. Illston, F. B. Illston, A. B. Innes-Dick, H. G. Ivatt, Sir Frederick James, Messrs. A. E. Jeffery, F. H. Jeffery, P. Jessop, J. D. Johnson, N. Johnson, T. H. B. Jones, J. A. Kay, W. G. Kefford, W. Kelway-Bamber, A. Kenyon, R. E. Ketley, G. Key, A. J. D. Kitson, W. S. Knight, C. Lawrie, T. T. Lambe, D. R. Lamb, E. Lawton, H. Lawton, L. J. Le Clair, L. Ledger, R. H. Lee, W. Leech, M. Lewis, P. A. Linforth, E. E. Lloyd, R. E. Lloyd, G. Lowery, M. D. Lowndes, L. Lynes, M. C. Lloyd.

Messrs. T. D. Macintosh, D. S. MacGee, W. F. McDermid, Sir Osborne Mance, Colonel F. A. Manley, Messrs. A. W. Manser, I. A. Marriott, P. L. Mardis, R. E. Marks, J. H. Marshall, V. M. Marshall, F. Mason, D. C. H. Matthews, R. E. G. Mayhew, G. A. R. Mead, H. M. Melhuish, K. E. Merefield, J. P. Metcalfe, R. Metcalfe, R. D. Metcalfe, N. Mighell, W. Mitchell, F. J. Mitchellhill, J. W. Moore, M. J. Moore, F. H. Morfey, C. W. Mossop, A. E. Moulton, H. J. C. Moyses, G. A. Musgrave, S. W. Marsh, O. S. Naylor, G. H. Negus, S. Newman, R. Newsham, J. C. Nisbet, O. S. Nock, J. W. Norris, H. Norwood, A. R. S. Nutting, W. R. Oaten.

Messrs. C. W. Paff, P. J. F. Page, J. E. G. Palmer, P. S. Palmer, G. C. R. Parker, S. E. Parkhouse, F. Parr, R. A. Pasley, J. J. C. Patterson, G. H. Paulin, S. Payne, K. R. Pearson, A. H. Peppercorn, A. C. Perry, J. R. J. Pett, G. Pettigrew-Smith, D. C. Plyer, T. Potter, J. R. Potts, E. V. M. Powell, R. A. Powell, E. Pugson.

Messrs. H. W. Ralph, V. P. Rawlings, W. G. W. Reid, H. W. H. Richards, Colonel G. Rigby, Messrs. A. Rimmer, J. L. Riordan, F. W. Roberts, K. W. Roberts, A. R. Robertson, A. B. Robins, D. Robinson, M. D. Robinson, W. F. Robinson, J. D. Rogers, G. Rollason, H. Rudgard (President-Elect), W. J. Ruston, D. M. Ryan.

Messrs. B. S. Saklavala, H. Sammons, A. C. E. Sandberg, J. E. Sandberg, H. H. Saunders, W. Schofield, E. W. Selby, Major M. P. Sells, Messrs. G. H. Sheffield, J. E. Sheldon, C. A. Shepherd, M. W. Shorter, C. N. Silvester, F. W. Sinclair, G. F. Sinclair, A. W. Simmons, C. S. Simmonds, J. A. Simms, C. R. H. Simpson, W. O. Skeat, A. R. Smith, C. L. M. Smith, H. D. Ward Smith, R. T. Smith, A. K. Southern, J. C. Spencer, C. E. Spurgeon, G. J. Steer, W. G.

Stevens, F. W. Still, M. Stipelman, C. W. Stokes, D. T. Strain, L. Strick, Commander E. R. Swarder, Messrs. W. B. G. Swayne, G. S. Szlumper.

Messrs. R. L. Tanner, A. R. Taylor, H. Taylor, S. Taylor, J. W. Terry, R. L. Terry, F. Theakston, G. Thomas, H. D. Thoms, H. Thorp, W. G. Tilling, A. G. Tindill, C. A. Torrance, C. S. L. Trask, I. B. Trevor, J. S. Tritton (President), G. Turbett, E. M. Turnbull, F. Turner, T. H. Turner, G. M. Vibart, J. F. B. Vidal, W. T. Vizer-Harmer.

Messrs. C. C. H. Wade, Colonel Walker, Messrs. L. Walker, C. C. Waddington, W. J. Wakley, Captain W. P. V. Wakley, Messrs. S. B. Warder, C. R. Wastie, A. J. Watkins, W. L. Watson, J. D. Watney, N. C. Watney, R. E. G. Weddell, M. Weiss, G. M. Wells, F. S. Whalley, H. A. A. White, E. T. White, H. B. White, I. Whittingham, G. R. A. Wilson, Major W. G. Wilson, Messrs. A. J. L. Winchester, J. P. Winder, G. F. Wix, D. G. Woodman, J. B. Woodman, W. P. Wrathall, A. R. Wright, H. E. Wright, G. Young.

## French Summer Train Services

Changes in the S.N.C.F. timetables for the summer services came into effect on May 9, and numerous others are scheduled for June and July. A night service on the Paris—Dieppe route will run three times a week from June 17 to September 30 (a daily daytime service was resumed on May 9). A night express is to run from Calais to Basle via Thionville from July 1 to October; and in the same period the South-Eastern Region trains 519 and 520 will operate in duplicate from Paris to Frasné, one section being for passengers to Berne and Interlaken, and the other for Lausanne, Brigue, and Milan. Two expresses from Paris to Mulhouse were extended to Basle on May 9, and on the same date a new day service began to run from Paris to Brussels and Amsterdam.

A new first and second class night service, with *couchettes*, is running between Paris and Vintimille (Italian frontier). A new train Paris to Lyons will be extended to Marseilles from July 1. Accelerated railcar services enable the journey from St. Etienne to Paris and return to be made the same day.

Eastern Region changes include the substitution on July 1 of steam trains for existing railcar services between Paris and Strasbourg, Paris and Châlons, and Paris and Rheims. Northern Region timetables include a new fast train from Paris to Lille and return, leaving Paris at 9.30 a.m.

Western Region additions include a mid-day service from Paris to Brest and Quimper; and from Paris to Nantes and Le Croisic. Seasonal summer services will be run from Paris to St. Brieuc, Les Sables, and Trouville. On the South-Western Region there are new day services from Paris to Limoges and return; and from Paris to Orleans and return.

Cross-country improvements include new night trains from Lyons to La Rochelle via Limoges and Angoulême; and from Strasbourg to Lyons, both running from July 1 to October 2.

**RAILWAYS CUT BY BRITISH COLUMBIA FLOODS.**—As a result of floods in British Columbia, said to be the worst in its history, the south-west of the country, including Vancouver, were isolated early this week from the rest of Canada by the washing away of railway lines. Vancouver is some 200 miles north of the towns of Vanport and The Dalles in Oregon, which were overwhelmed by the flooding of the Columbia River.

## Inter-Railway First-Aid Competition

The Inter-Railway First-Aid Competition was held in the Borough Polytechnic, London, on May 26, when nine teams participated, two from each of the former group railways (which had been selected by a series of competitions organised by the respective companies) and one from the ungrouped railways (selected by a preliminary competition arranged by the St. John Ambulance Association). The result was as under:—

Horsham (Southern) ... ..	483
Camden "A" (London Midland) ...	447½
Wolverton Works (London Midland) ...	433½
Kings Cross Loco. (Eastern) ... ..	424½
Waterloo No. 1 (Southern) ... ..	417
Melton Constable (Midland & G.N. Joint)	411
Newport High Street "A" (Western) ...	391½
Langwith Loco. (Eastern) ... ..	379
Swindon "A" (Western) ... ..	351

The adjudicators were Dr. M. M. Scott, Dr. D. F. Barrett, and Dr. W. N. Booth. The St. John Ambulance Association is indebted to Mrs. John Maxwell and Associated British Pictures Corporation Limited for their assistance in providing the stage setting.

The subsequent proceedings were presided over by the Earl of Athlone, who was supported by Sir Cyril Hurcomb, Chairman of the British Transport Commission; Brigadier W. B. G. Barne, Secretary-General, Order of St. John; Major-General F. V. B. Wits, Assistant Director of Ambulance; Lady Dunbar-Nasmith; and Mr. K. W. C. Grand, Chief Regional Officer, Western Region, Mr. G. L. Darbyshire, Chief Regional Officer, London Midland Region, and Mr. R. M. T. Richards, Deputy Chief Regional Officer, Southern Region, British Railways; and the three adjudicators.

The trophies and prizes were presented to the winning teams by Sir Cyril Hurcomb, who said that as Chairman of the British Transport Commission he welcomed the opportunity of acknowledging how much they were indebted to the Order of St. John of Jerusalem for its work in organising the competition and for offering such splendid prizes. It was indeed a pleasure to meet some of the finest ambulance men in the country, drawn from the railway service, who had successfully reached the final competition only after eliminating competitions organised by their regions.

The interest of railwaymen in first aid, he said, was an instance of the share taken by that great community in our general life—not only in sports, games, and music, but in local government and social services. The ability and willingness of railway and other transport workers to participate in useful social activities had not been diminished, and would, he hoped, be fostered, by the nationalisation of transport. It was only right that they should all acknowledge their gratitude to the men and women who had made many sacrifices to acquire the knowledge and the skill that enabled them to take part in the eliminating and local competitions, just as they offered congratulations to those finally chosen to represent their regions; and the winners could indeed be proud of the distinction they had achieved. He appealed to the assembled teams, men and women of standing in the ambulance world whom he was proud to greet and to congratulate on their devotion to duty and on their unselfish conduct in giving up their leisure to the noble work of healing, as being the best able to inspire the new generation with their own spirit, so that they might

in turn be ready to "pass on the torch" to those who would come after them in the unending race against suffering.

The Challenge Shield had been instituted by the St. John Ambulance Association as far back as 1897. Since then the competition had been held annually, except during the two world wars. For the present year the competition had been on the territorial basis of the old railway companies, two teams from each of the big four and one (on this day from the Midland & Great Northern Joint Railway) from the ungrouped companies. In future, the competition would be between the six regions of the new organisation under the Railway Executive, two teams from each, and one from the London Transport Executive.

**KENTISH TOWN MOTIVE POWER DEPOT VETERANS DINNER.**—Eighty retired members of Kentish Town Motive Power Depot, London Midland Region, were recently entertained by the canteen committee to their second annual reunion dinner and concert. Mr. John Benstead, Member of the British Transport Commission, said he brought best wishes from the Commission. He expressed the hope "that the younger railwaymen would display the same fortitude and pride in the job that you old veterans have done in the past." All the company sent best wishes to Mr. J. Skinner, 93-year-old ex-driver, who was unable to attend, and cheered Mr. Horace Smith, 84-year-old ex-driver, and the oldest member present. Mr. J. G. Baty, General Secretary, A.S.L.E.F., and the Deputy Mayor of St. Pancras were also present.

## Inauguration of the Northern Transandine Railway

(Concluded from page 660)

Argentina, such as cotton, tobacco, cattle, wood and forestry products, sugar, rice, fruit, and cereals. On the other hand, the mineral wealth of Chile, such as nitrates, copper, lead, sulphur, marble, and granite will be readily available to Argentina, as also fishery products from the Chilean coast. Both Northern Chile and Peru will be able to absorb large quantities of Argentine cattle, while direct trade between Northern Argentina and the United States, China, and Japan no doubt will receive a considerable impulse in the course of time, due to the much shorter distances to be traversed when compared with previous routes. The following illustrate the savings in distance:—

### DISTANCE BETWEEN SAN FRANCISCO AND SALTA

Former route	
San Francisco—Buenos Aires, via Panama ... ..	8,646 nautical miles
Buenos Aires—Salta ... ..	1,008 miles
New route	
San Francisco—Antofagasta ... ..	4,562 nautical miles
Antofagasta—Salta ... ..	560 miles

The Argentine section of the new railway was opened to public service on February 22. For the time being, there will be one train a week in each direction between Salta and Socompa, with dining and sleeping cars. The previous weekly train between Salta and San Antonio de los Cobres continues to run. Arrangements for a through service between Buenos Aires, Salta, and Antofagasta doubtless will be made in the near future.



## Southern Region "Thanet Belle" Inaugurated

Five beauty queens from the seaside resorts of Whitstable, Herne Bay, Margate, Broadstairs, and Ramsgate were among the first passengers who travelled by the new all-Pullman holiday train, the "Thanet Belle," when it left Victoria at 11.30 a.m. on May 31, the first day of the summer train service. They were accompanied by Miss Cicely Cox, representing "Miss Kent."

At Ramsgate Station the official reception of the new train included a speech of welcome by the Mayor, Alderman J. J. White, to which Mr. R. M. T. Richards, O.B.E., Deputy Chief Regional Officer, Southern Region, replied. At other stations where the train stopped, the chairmen of the local urban district councils, and at Margate the Mayor, greeted the driver and joined the train, which was drawn by the "Battle of Britain" class locomotive *Manston*, bearing a special headboard fixed on the buffer beam.

The "Thanet Belle" is the fourth of the "Belle" trains which are now in service on the Southern Region, the other three being the Brighton, Bournemouth, and Devon "Belles."

The train is composed of two first and eight third class Pullman cars, one of which is named *Maid of Kent*. It runs daily, Sundays included, to Ramsgate, calling at Whitstable, Herne Bay, Margate, and Broadstairs. There are 269 reservable seats, of which 225 are third class. Travel is subject to the usual supplementary charges, which in this case are 3s. 6d. first class and 2s. third, irrespective of the length of the journey. The timetable of the train, which will run daily throughout the summer is as follows:—

DOWN		Saturdays only	
Daily except Saturdays			
Victoria ...	11.30 a.m.	3. 5 p.m.	
Whitstable ...	12.51 p.m.	4.29 p.m.	
Herne Bay ...	1. 0 p.m.	4.38 p.m.	
Margate ...	1.17 p.m.	4.56 p.m.	
Broadstairs ...	1.28 p.m.	5. 7 p.m.	
Ramsgate ...	1.34 p.m.	5.15 p.m.	
UP		Saturdays and Sundays only	
Mondays to Fridays			
Ramsgate ...	5. 5 p.m.	6.15 p.m.	
Broadstairs ...	5.10 p.m.	6.20 p.m.	
Margate ...	5.18 p.m.	6.29 p.m.	
Herne Bay ...	5.35 p.m.	6.48 p.m.	
Whitstable ...	5.44 p.m.	6.57 p.m.	
Victoria ...	7.10 p.m.	8.20 p.m.	

Provision of the "Thanet Belle" has been made possible by the Pullman Car Company turning out every available car renovated and reconditioned, and so helping out with the shortage of existing main-line coaches at a time when the holiday traffic between London and the Kent Coast is likely to be the heaviest yet experienced.

The Southern Region party travelling on the train included the following:—

**Southern Region:** Messrs. R. M. T. Richards, Chief Regional Officer; A. E. Hammett, Commercial Superintendent; S. W. Smart, Superintendent of Operation; C. Grasmann, Public Relations Officer; E. W. Belcher, Hotels & Catering Superintendent; P. Nunn, London East Divisional Superintendent; D. Sheppy, Eastern Divisional Superintendent of Motive Power; G. Wynne Davies, Assistant Public Relations Officer; K. R. Ellison, Public Relations Assistant; H. N. Greenleaf, Assistant Editor, *Southern Region Magazine*; A. C. Sreatfield, Press Agent.

**Guests:** Mr. F. D. M. Harding, General Manager, Pullman Car Co. Ltd.; Captain J. C. M. Shepard.

## British Railways Officers' Guild

In the course of his report presented at the third annual general meeting of the British Railways Officers' Guild, held recently, Mr. L. F. Rowlandson, Master of the Guild, states that the number of new members enrolled since January 1, 1947, is 635; over 50 per cent. of those eligible have now joined.

The report states that it is difficult to describe in moderate language the treatment accorded to railway officers and the higher administrative and technical staffs so far as salaries are concerned since 1939. The margin of payment for responsibility was never adequate, and the continued maltreatment of the staff with a pre-war rate of over £500 a year is the cause of much justifiable resentment among members of the Guild. It does not appear to be recognised, the report continues, that if the railways are not to descend to the level of other State-administered concerns, so far as initiative and acceptance of responsibility are concerned, the standards

of the past can only be maintained through the enthusiastic application of the skill and experience of a properly-remunerated and contented higher administrative staff. It has not yet been possible to obtain any assurance from the Railway Executive that the unsatisfactory position in regard to salaries, aggravated by the recent advances to the lower-rated staff, will be met adequately and adjusted retrospectively.

On the subject of negotiating machinery, the report refers to Part VII, Section 95, of the Transport Act, which provides for the British Transport Commission, except in so far as it is satisfied that adequate machinery exists, to seek consultation with any organisation appearing appropriate with a view to the conclusion of agreements with respect to the establishment and maintenance of machinery for settlement by negotiation of terms and conditions of employment. The report states that at present the Commission appears disinclined to act on this basis so far as those represented by the Guild are concerned.

The report continues by referring to the position of some officers of certain road transport firms, and of members of the Guild employed on dock, canal and hotel work who come under Executives other than the Railway Executive. To meet their case, and to enable road transport officers to be accepted as members of the Guild, a proposal will be made for its name to be altered to British Transport Officers' Guild. If the Transport Commission agrees, it is stated, to adequate machinery for negotiation, in accordance with the Transport Act, it is proposed to go forward with an application for a charter, under the new title; but, if not, the basis of the association may require reconsideration.

Thanks are expressed in the report to the Editors of *The Railway Gazette* and *Modern Transport* for their support for the Guild; and to the members of the executive committee and the wardens of the Guild, its Honorary Solicitor (Mr. S. P. Jones), Honorary Treasurer (Mr. W. J. England) and Secretary (Mr. J. J. Tobin).

**NON-STOP "FLYING SCOTSMAN."**—A letter for the Lord Provost of Edinburgh was handed to the guard of the non-stop "Flying Scotsman" by Sir Frederick Wells, Lord Mayor of London, when he sent off the train from Kings Cross on May 31. Present at the ceremony, during which Sir Frederick Wells was introduced to members of the "Flying Scotsman" train staff, were Mr. V. M. Barrington-Ward, Member, Railway Executive, Mr. C. K. Bird, Chief Regional Officer, Eastern Region, Mr. George Dow, Press Relations Officer, Eastern & North Eastern Regions, and the following officers of the Eastern Region: Messrs. C. G. G. Dandridge, Commercial Superintendent, H. C. Johnson, Operating Superintendent, Western Section, G. A. Musgrave, Locomotive Running Superintendent, Western Section, and Colonel N. McKay Jesper, Chief of Police. Three former top link drivers of the L.N.E.R. also present were Messrs. Nash, Brain and Hardiman. Mr. Andrew H. A. Murray, Lord Provost of Edinburgh, was present to send off the up "Flying Scotsman" from Edinburgh, and welcomed the return of the non-stop train; he was accompanied by Mr. Walter Monslow, M.P., H. G. Sayers, Operating Superintendent, Scottish Region, and other officers.

## First Departure of the "Thanet Belle"



Beauty queens of Kent resorts with the driver of the "Thanet Belle" before the train left Victoria on May 31

## Associated Electrical Industries Limited

The annual general meeting of Associated Electrical Industries Limited was held in London on May 5, the Rt. Hon. Oliver Lyttelton, D.S.O., M.C., M.P., Chairman of the company, presiding.

The Chairman, in moving the adoption of the report and accounts, said that, considering the difficulties encountered in 1947, it was with a sense of satisfaction that he was able to record that during the year the invoicing of finished products from their factories, which now were situated all over the country, rose by no less than 18 per cent. Part of this was due to the rise in prices of their products, which in its turn was chiefly due to the rise in price of raw materials. Part, however, was due to increased volume made possible by our additional manufacturing capacity.

Good progress had been made with the new plants at Motherwell and Sunderland. The Sunderland labour force had been built up from 496 in January, 1947, to over 1,000 in December, and this number would increase. At Motherwell, which was in an earlier stage of development, but where they planned large-scale production of electric meters and X-ray apparatus, the labour force at the end of the year was no more than 100. They also had new plants in operation at Llandudno Junction and Hereford which together employed over 600 people in areas where they had not previously had factories.

The amount expended each year in research was approximately £1,000,000, a sum which might well be considered large if it was a single capital investment and not an annual expenditure. They still held the opinion that research, both fundamental and applied, would prove to be in the future the key to the continuing success of their undertaking.

Quoting some examples of research, the Chairman said that there had been notable advances made in the metallurgical field by Metropolitan-Vickers, particularly regarding the problems involved in the production of gas-free metals and heat-resisting alloys.

As usual, there has been special activity in the electric lamp field, and the perfection of a fluorescent powder had extended the improvement made last year in a "warm white" coloured lamp; the luminous output of the 80-watt fluorescent lamp had been increased. Their laboratories were in the forefront of the applications of the mercury cadmium lamp to film studios, and of fluorescent lamps to street lighting and to mines. Both these uses were expanding.

Researches had been continued also on silicone synthetic resins, particularly as regards an improved varnish for treating woven glass cloth to produce insulating fabric with long life at high temperatures, thus enabling, for example, a motor to be operated at more than double its normal horsepower.

The total value of exports made by their group to all parts of the world in 1947 amounted to little short of £14,000,000. This figure should give some heart to those who are inclined to think that the industries of this country were incapable of competing in the markets of the world. At the end of 1947 the firm orders on the books were the highest ever recorded in the history of the group, and in 1948 the rate at which orders were being received was still increasing.

Besides increased sales abroad, they had increased their interests in the Empire by making a further considerable investment in South Africa. They had acquired a substantial interest in Vecor, which had a general engineering works in Johannesburg, which shortly would be in production. Also, they had acquired the long-established business of Marthinusens Limited, which was chiefly engaged in repair work on electrical apparatus used in the Union, particularly in the mining industry, and which also manufactured transformers and motors.

Regarding gas turbines, the first naval vessel to put to sea propelled by gas turbines and the first flying-boat to take the air were both equipped with engines of Metropolitan-Vickers design and manufac-

ture. They thus could claim that the pre-eminent position which they occupied at the beginning of these important developments had been fully maintained during 1947. They regarded the development of gas turbines as being of great importance in this century, and they expected that gas turbines would be used on an increasing scale as prime movers.

During 1947 orders were received for generating equipment and other heavy plant from Australia, Cyprus, Egypt, Iceland, India, Iran, Portugal, Spain, South Africa, and South America, and also for many power stations in this country.

The report and accounts were adopted.

## Questions in Parliament

### British Railways Dining Car Staff

Mr. W. Monslow (Barrow-in-Furness—Lab.) on May 25 asked the Minister of Labour what action he was taking in the dispute arising from the alteration without notice of the pay and working conditions of dining car staff employed on British Railways.

Mr. George Isaacs (Minister of Labour), in a written answer, stated: No such dispute has been reported to my department. Adequate machinery exists in the industry for dealing with such questions.

### Scrap Metal Imports

Colonel L. Ropner (Barkston Ash—C.) on May 10 asked the Minister of Supply what was the total amount of German scrap metal imported into this country since the beginning of 1948; and what percentage that figure represented of the amount anticipated for the whole year.

Mr. J. Jones (Joint Parliamentary Secretary, Ministry of Supply) in a written answer stated: Between January 1 and April 30, 1948, about 167,000 tons of iron and steel scrap were imported from Germany. I am unable to forecast how much will be delivered during the whole year.

### Retirement of Railway Staff

Major Guy Lloyd (East Renfrew—C.) on May 10 asked the Minister of Transport whether it was the intention of British Railways to waive the retirement of able-bodied men, notably signalmen, at 60 years of age during the present shortage of experienced and efficient railway workers, as had been the practice during the war, and in order that the 44 hours agreement might be implemented.

Mr. Alfred Barnes (Minister of Transport) stated in a written answer: Under the Transport Act, 1947, the terms and conditions of employment of railwaymen are matters primarily for the British Transport Commission and the unions concerned. I have brought Major Lloyd's question to the notice of the Commission.

### Railway Companies Compensation for Thefts and Losses

Lt.-Colonel Granville Sharp (Spenn Valley—Lab.) on May 26 asked the Minister of Transport what proportion of the £2,440,000 paid by the railway companies on account of thefts and losses during 1946 had been borne directly or indirectly by his department; how he explained that substantial increase; and whether available information indicated that the corresponding figure for 1947 would be less.

Mr. Alfred Barnes, in a written answer, stated: Under the Railway Control Agreement compensation paid by the railway companies on account of thefts and losses

## Lord Latham on the Central Line



Lord Latham, Chairman of the London Transport Executive, saw the working of the morning rush-hour traffic on the new Central Line extension on May 31, and in the photograph reproduced above is seen travelling as a passenger from Hainault to Newbury Park

of goods is regarded as a working expense and included in the pooled revenue receipts and expenses of the controlled undertakings. The net revenue of the pool account accrued to the Government, which paid the controlled undertakings fixed annual sums. The cost of compensation paid, therefore, was borne indirectly by the Government. The increase in the number of thefts is probably due to some lowering of moral standards following the war and to the greater urge to steal because of the increased value of rationed and scarce goods. I regret that, as the following table shows, there was an increase in the figures for 1947:—

	Number of claims	Amount £
1947 ... ..	628,427	2,671,383
1946 ... ..	614,210	2,441,023
Increase ...	14,217	230,360

#### Transport of Horses

Mr. D. L. Lipson (Cheltenham—Ind.) on May 26 asked the Minister of Agriculture how many horses had been imported for slaughter from Eire during the past six months; and what steps were being taken to ensure that the animals received enough food and water on their journey to the slaughterhouse; and that they did not suffer any cruel treatment.

Mr. George Brown (Joint Parliamentary Secretary, Ministry of Agriculture), in a written answer, stated: As to the first part of the question, separate records are not kept of the number of horses imported for slaughter. As to the second part, I am sending Mr. Lipson a copy of the Exportation & Transit of Horses, Asses & Mules Order, 1921, from which he will see the requirements imposed on railway authorities for feeding and watering horses and for the prevention of suffering during rail transit. I also invite Mr. Lipson's attention to the Protection of Animals Act, 1911, and to the Slaughter of Animals Act, 1933.

#### Withdrawal of Special Buses

Flying-Officer H. W. Bowden (Leicester South—Lab.) on May 26 asked the Minister of Transport if he was aware that the special buses run from R.A.F., Melksham, Wiltshire, to all parts of the country to carry personnel proceeding on leave had been withdrawn by the local Traffic Commissioners; that that entailed additional expense for rail travel and loss of time; and if he would take steps to have those buses restored.

Mr. Alfred Barnes stated in a written answer: In exercising their discretion to grant or refuse road service licences the licensing authorities are required by statute to have regard to the availability of alternative facilities including transport by rail. The decisions of licensing authorities are subject to appeal to me under section 81 of the Road Traffic Act, 1930, but I cannot otherwise intervene.

#### Kenya & Uganda Railways Inquiry Report

Mr. Harold Davies (Leek—Lab.) on May 5 asked the Secretary of State for the Colonies whether a report of the recent Kenya inquiry into the efficiency of labour on the Kenya & Uganda Railways, sponsored by the Colonial Social Science Research Council, was to be published, and when.

Mr. D. R. Rees-Williams (Parliamentary Under-Secretary of State for the Colonies): The Secretary of State for the Colonies has nothing to add at present to the answer which he gave to Mr. J. Rankin (Tradeston—Lab.) on February 4.

Mr. Davies said that in the answer given to Mr. Rankin on February 4 the House had been told that the permission of the management of the railway would be asked before the report was discussed. He understood that permission had now been granted. In view of that, he asked the Under-Secretary to have the report published in time for the discussion on Colonial affairs.

Mr. Rees-Williams: I was not aware that the railway authorities had signified their approval, but I will look into the matter, and, if they have, I will see that that is done.

Mr. Davies: I hope that the Under-Secretary will expedite the publication of the report.

## Notes and News

**Clerk, Class I, Required.**—A clerk, class I, not over 30 years of age, is required for the accounts department by the Kenya & Uganda Railways & Harbours, for one tour of three to four years, with prospect of permanency. See Official Notices on page 671.

**Visit to Newton Heath Concrete Depot.**—The next meeting of the Permanent Way Institution, Manchester & Liverpool Section, will be on Saturday, June 19, at 2.45 p.m., when a visit to Newton Heath Concrete Depot will be made by permission of Mr. W. K. Wallace, Chief Civil Engineer, London Midland Region.

**London Transport Executive.**—Applications are invited for posts in the department of the Chief Mechanical Engineer (Railways) for electrical and mechanical engineering work in the running, technical, and shops divisions. Candidates, not over 30 years of age, should be qualified engineers with practical experience in railway heavy or medium engineering. See Official Notices on page 671.

**Increased Cheap Day Ticket Facilities.**—On June 1, British Railways, Southern Region, considerably extended the scope of cheap day tickets from London to beauty spots in Kent and Surrey, and to riverside resorts in the Thames Valley. These cheap day tickets are available every day, by all trains, with the exception of those leaving London between 4.30 and 6.30 p.m., Mondays to Fridays, and 12 noon to 2 p.m. on Saturdays. Typical places to which the tickets are being issued are Hampton Court, Windsor, Boxhill, Guildford, Eynsford, and Sevenoaks.

**Modernised Control Room at Manchester, Eastern Region.**—Delivery of a load of modern metal furniture put the finishing touches last week to a completely re-equipped control room at Manchester London Road, Eastern Region. Each controller now has a comfortable upholstered bucket arm-chair; metal control desks, fitted with the latest appliances to facilitate the work, have been designed to fit individual requirements. Special new train diagram boards have been made, on which is traced the constant flow of heavy freight and coal trains into the North-West industrial zone. A section controller makes hundreds of movements on every shift, plotting the progress of trains by means of coded tokens. This process has been made as effortless as possible by the design of the new boards, which are built into metal housings. The colour scheme of the

room is green. Conversation can be conducted in subdued tones by means of an intercommunication system, by which speech can be relayed, if necessary, through miniature built-in loudspeakers. Electric clocks also are built into every desk unit, thus securing complete uniformity of time records.

**Superheater Co. Ltd.**—The final trading profit for 1947 was £186,752, comparing with £144,315 in the preceding year. As has been announced previously, the ordinary dividend is 45 per cent., consisting of 42½ per cent. plus a cash distribution of 2 per cent. tax free. The carry-forward of £32,383 compares with the sum of £28,540 brought in.

**Institute of Transport Meetings, 1948-49.**—Mr. D. R. Lamb will deliver his presidential address to the Institute of Transport on October 18 next. Other meetings in London, excluding those of the Metropolitan Section and the Metropolitan Graduate & Student Society, will be held as follows: November 15, 1948; December 13, 1948 (Henry Spurrier Memorial Lecture); January 17, 1949; February 14, 1949 (Brancker Memorial Lecture); March 21, 1949. The anniversary luncheon has been fixed for November 2 next, and the annual dinner for March 18, 1949. Informal luncheons are to be held on February 22, 1949, and April 12, 1949.

**"Transport Statistics."**—The second issue of *Transport Statistics* has been published by the British Transport Commission, and covers the four-week period ended Sunday, February 22. We hope to make editorial reference to it in next week's issue. *Transport Statistics*, which is published monthly, contains financial, operating, and other figures relating to British Railways, London Transport, and Inland Waterways. Copies may be ordered from the British Railways Office, 71, Regent Street, W.1, and London Transport Enquiry Office, 55, Broadway, S.W.1, at price 1s. each, or annual subscriptions may be placed at 12s. 6d., including postage.

**Western Region Summer Services.**—The "Torrey Express" of the Western Region reverted to its original noon departure time from Paddington when the summer train service began last Monday, instead of leaving at 11 a.m. as previously. On Saturdays, it runs non-stop to Torquay, but calls at Exeter on Mondays to Fridays. Other principal features of the Western Region summer timetable are 19 more daily main-line services on weekdays than last summer, and a further 43 at weekends only; sixteen new restaurant car services, a daily daylight service on weekdays between Weymouth and the Channel Islands; and, from July 17, a service on six nights a week between Fishguard and Rosslare instead of the previous three times a week.

**Railway Exhibition at Leith.**—On May 23 the Lord Provost of Edinburgh opened an exhibition of British Railways locomotives and rolling stock at Leith in aid of local charities. The exhibition closed on May 25. Four main-line locomotives were exhibited, consisting of a Class "5" mixed traffic 4-6-0 of the former L.M.S.R., two L.N.E.R. Pacifics, and a "B1" L.N.E.R. mixed-traffic locomotive. Among the passenger vehicles in the exhibition were the stainless-steel coach *Silver Princess* built by the Pressed Steel Co. Ltd., and restaurant and sleeping cars. The exhibi-



bition also included rolling stock and containers for perishable traffic, a mobile signalling school, road vehicles and trailers, and a Hallade track recorder.

**Institute of Transport, Metropolitan Section.**—The council of the Institute of Transport has approved the formation by the Metropolitan Section of a Chelmsford & District Group and a Guildford & District Group.

**Agreed Charges.**—Applications for the approval of 95 further agreed charges under the provisions of section 37 of the Road & Rail Traffic Act, 1933, have been lodged with the Transport Tribunal. Notices of objection must be filed on or before June 15.

**Glenfield & Kennedy Limited.**—A final ordinary dividend of 5 per cent. proposed for the year ended March 31 will again make the total for the year up to 10 per cent., and to this there is added once more a cash bonus of 10 per cent. The company's net profit was £172,185, an increase of £62,575.

**Travel Restrictions Eased.**—The following changes in travel allowances for visitors to this country are reported by the British Travel Association: France, £15 per head, against £5; Holland, £30, against £3; Denmark, £25, against 10s. for pleasure travel; and Norway, £25, compared with no allowance. Such concessions should have a beneficial effect on tourist revenue, as about 160,000 visitors are expected from these four countries this year, and on this calculation the increased allowances will result in additional income to Great Britain of £1,500,000 in 1948.

**Western Region First-Aid Movement.**—First-aid competitions have been held in each of the divisions of the Western Region, British Railways, and the total number of teams entering was 118. The semi-final eliminating rounds were held at Bristol, Newport, and Birmingham. The teams gaining the first eight places in the semi-finals competed in the final held in the Porchester Hall, Paddington, when the tests were set by Dr. M. M. Scott and Major A. C. White Knox, both of

London, and a large number of spectators, including officers of the Region, watched the contests. The presentation of trophies and awards was presided over by Mr. K. W. C. Grand, Chief Regional Officer, and was made by Mrs. Grand. The result of the test was announced by the Ambulance Centre Secretary, Mr. P. Anstey, as under:—

	Marks (maximum 400)
Newport High Street ... (winners of Challenge Shield)	291
Swindon ... (winners of Carvell Cup)	287
Cardiff Docks ...	258
Truro Loco. ... (winners of Butt Bowl for securing first place of any class 2 team)	225½
Gloucester ...	221
Weymouth ...	211
Ruabon ...	211
Porth ...	205

The opportunity was taken of presenting medals and certificates for exceptionally efficient first aid rendered by members of the staff during 1947; and Dr. H. H. Cavendish Fuller, Chief Medical Officer, commended the work of the recipients. A vote of thanks to the adjudicators was proposed by Mr. R. Burgoyne, Regional Staff Officer.

**Karachi Confirmed as Pakistan Capital.**—The Constituent Assembly of Pakistan resolved on May 23 that Karachi should be the capital of the Dominion. It had been the provisional capital since Pakistan came into existence. Karachi is also the capital of Sind, and a solution still has to be found for certain issues arising from the location of the Dominion and provincial capital at the same place.

**Brush Electrical Diesel Engine Contracts with Russia.**—It is announced by the Brush Electrical Engineering Co. Ltd. and its associated companies, Mirreles, Bickerton & Day Limited and J. & H. McLaren Limited, that they have signed contracts to the value of £2,000,000 and expect to sign very shortly further contracts amounting to more than £1,000,000, for the supply to Russia of diesel engines, diesel-electric generators, and ancillary equipment. Part of the contracts is for equipment scheduled under the recent Anglo-Russian trade agreement and substantial deliveries

already have been made. Mr. Alan P. Good, Managing Director of the above three companies, between whom negotiations are proceeding for a merger, stated recently that the signing of these contracts will bring the total value of the order book for the group to more than £14,000,000.

**The Indian State Railways' Dinner.**—The annual dinner of the Indian State Railways was held on Monday last at Chez Auguste, London, W.1. Sir Leonard Wilson presided. Colonel R. Emerson, retired recently from the post of Chief Commissioner of Indian Railways, proposed the toast of the railways. We hope to include a report of the proceedings in our next week's issue.

**Increased Meal Prices Replace Restaurant Car Surcharge.**—From May 31 the price of lunches in British Railways restaurant cars has been increased from 3s. 6d. to 4s. and the charges for teas have been standardised at 1s. 6d. Some increases have been made, also, in the prices of drinks and light refreshment in station buffets, as well as restaurant cars. At the same time, the 10 per cent. surcharge, to which reference was made in an editorial note in our May 14 issue, has been abandoned. The surcharge took the place of the previous service charge, the proceeds being retained by the railways to offset the cost of higher wages. This was the subject of a protest by restaurant car staff, who considered that their tips had fallen off since the surcharge was introduced, although notices had been displayed in the cars explaining that the practice of adding a service charge in lieu of gratuities had been discontinued.

**Goswick Accident Report.**—The report on the derailment of an Edinburgh-London express at Goswick on October 26 last year (see our October 31 and November 7, 1947, issues) has now been published. Colonel A. C. Trench and Lt.-Colonel G. R. S. Wilson, who conducted the inquiry, attribute the main responsibility for the accident to the driver, who is stated not to have exercised reasonable and proper caution by a substantial reduction of speed until such time as he was in a position to be certain that all the Goswick signals were clear for him. He had failed to see the distant signal, which was at "caution" in consequence of a diversion from the main to the goods line during repairs on the former. The inspecting officers feel that the driver's grave breach of discipline in taking an unauthorised passenger on the footplate may well have had some bearing on his failure to exercise proper caution in the operation of his train. The unauthorised passenger was a naval leading stoker, who had been employed formerly as a porter and wished to become a driver on his discharge from the Navy. He had asked for a trip on the engine as far as Newcastle.

**Eastern Region Locomotive Exchanges.**—Preliminary journeys with a Southern Region "West Country" Pacific on the 10 a.m. down and 8.25 a.m. up Marylebone—Manchester expresses have been held from May 31 to June 3, to be followed by test runs from June 8-11. Between the same dates, trials of an Eastern Region "A4" Pacific are taking place on the 10.50 a.m. down and 12.42 p.m. up expresses between Waterloo and Exeter. A London Midland Region Class "5" 4-6-0 will make preliminary and trial runs be-

### Western Region First-Aid Competition



Mr. K. W. C. Grand, Chief Regional Officer, Western Region, and Mrs. Grand congratulating the members of Newport High Street team, winners in the final of the regional first-aid competition, at which Mrs. Grand presented the trophies

## OFFICIAL NOTICES

## Crown Agents for the Colonies

APPLICATIONS from qualified candidates are invited for the following post:—

CLERK, CLASS 1, required for Accounts Department by Kenya & Uganda Railway and Harbours Administration for tour of 3 to 4 years, with prospect of permanency. Salary according to age and experience in scale £420, rising to £480 a year, plus cost-of-living bonus £60 for single man and between £125 and £187 10s. for married man, according to number of children. Outfit allowance £30. Free passages and quarters. Candidates, not over 30, should possess recognised accountancy qualifications and have had experience in Railway Expenditure Accounting. Apply at once by letter, stating age, whether married or single, and full particulars of qualifications and experience, and mentioning this paper, to the CROWN AGENTS FOR THE COLONIES, 4, Millbank, London, S.W.1, quoting M/N/18537 (3E) on both letter and envelope.

## INTERNATIONAL RAILWAY ASSOCIATIONS.

Notes on the work of the various associations concerned with international traffic, principally on the European Continent. 2s. By post 2s. 2d.

None of the vacancies on this page relates to a man between the ages of 18 and 50, inclusive, or a woman between the ages of 18 and 40, inclusive, unless he, or she, is excepted from the provisions of the Control of Engagement Order, 1947, or the vacancy is for employment excepted from the provisions of that Order.

WANTED.—5-ton Loco. Steam Crane, 30-40-ft. jib, Smith preferred.—Reply to Box 72, *The Railway Gazette*, 33, Tothill Street, London, S.W.1.

WANTED.—Steam Locomotive, standard gauge, 14-in. cyls., 160-lb. w.p.—Details, date of make, etc., to Box 73, *The Railway Gazette*, 33, Tothill Street, London, S.W.1.

THE Proprietors of British Patents Nos. 579,476 and 589,565 are prepared to sell the patents or to license British Manufacturers to work thereunder. They relate to Articulated Railway Vehicles. Address: BOULT, WADE & TENNANT, 112, Hatton Garden, London, E.C.1.

tween Marylebone and Manchester on the trains named above from June 7-10 and June 15-18 respectively, while the same dates are allotted for the running of an Eastern Region "B1" 4-6-0 between St. Pancras and Manchester on the 10.15 a.m. down and 1.50 p.m. up. A Western Region "Hall" will go to the former G.C. Section for preliminary runs on the Marylebone—Manchester route between June 14 and 17, to be followed by test journeys from June 22-25. The first appearance of an Eastern Region "B1" on Western Region metals in the current locomotive exchanges will take place on June 28, when one of these locomotives begins preliminary workings with the 1.35 p.m. expresses in each direction between Bristol and Plymouth.

**Iron and Steel Distribution Booklet.**—Copies of a booklet, "Notes to Consumers," covering various aspects of the iron and steel distribution scheme, including the names and addresses of authorising departments with details of their authorising responsibilities and the items which are covered by direct authorisations, are on sale at His Majesty's Stationery Office shops, price 6d. each.

**Imperial Chemical Industries Limited.**—Consolidated trading profits of £22,913,165 are shown in the full accounts for 1947, compared with £20,562,708 in the previous year. Revenue from subsidiaries and investments brought the total up to £25,207,846, and after meeting all charges there was a net consolidated income of £8,290,859. Of this sum, the parent company's share was £7,646,933, against £7,171,109 last year.

**Sunday All-Pullman Express to Eastbourne.**—On June 6 and every subsequent Sunday throughout the summer, the Southern Region will run a non-stop all-Pullman train, first and third class, to and from Eastbourne. This Sunday express, leaving Victoria at 10.40 a.m. will arrive at Eastbourne at noon. Passengers using the train for a day trip will have nearly 6 hr. by the sea, as the up train leaves Eastbourne at 5.45 p.m., arriving Victoria 7.5 p.m. Pullman supplementary fees will be 3s. first class and 1s. 6d. third class.

**"South Yorkshireman" Naming Ceremony.**—Before the "South Yorkshireman" express left Bradford Exchange for Marylebone on its inaugural run on May 31, the Lord Mayor of Bradford, Alderman F. J. Cowie, unveiled the nameboard carried on the locomotive smokebox. He then signalled the train away on its

journey to London. The Mayor and Mayoress of Huddersfield travelled on the train from Bradford to Huddersfield and signalled it away from there. Apart from the 9.7 a.m. to Euston, the "South Yorkshireman" is the only through service between Huddersfield and London. It is composed of the latest ex-L.N.E.R. coaches, with transverse corridors between blocks of compartments.

**U.S.A. Nationalisation Plans Denied.**—A resolution was passed by the Rail Labour Association on May 25 urging the United States Government to take control of the revenues of the railways and to bargain on wages and working conditions. Later, President Truman's Press Secretary issued an announcement stating that the Government was not considering nationalisation of the railways, in reply to questions that had been asked by newspaper correspondents after the union's resolution was made known. The President had signed an order on May 10 directing the Secretary for War to take over and operate the railways in consequence of a threatened railway strike (see our May 14 issue), but the strike was called off early the next day after a Court injunction had been obtained to forbid it. This injunction has been extended to June 10.

**L.M.R. Bradford Express Derailment Inquiry.**—An inquiry was opened at Sheffield on June 1 into the derailment of a St. Pancras to Bradford express at Wath-on-Deane, near Mexborough, on May 18 (see our May 21 issue). The driver of the locomotive piloting the express said that before the derailment he saw the line ahead appear so distorted that he "could hardly believe his eyes." The right-hand rail was nearly in the centre of the track, but both rails were symmetrical. Another driver gave evidence that he had been asked by a passenger to report severe oscillation of the rear coach of a preceding train. A ganger said he had twice sent a man out to make sure everything was in order because of the heat of the day.

**Price Stabilisation: Electric Motors.**—The Dynamo & Motor Association, 36, Kingsway, London, W.C.2, announces that in support of the Government's desire to stabilise prices, and in accordance with the recommendations in the Federation of British Industries' report to the Government on prices and profits, it has decided not to increase the present general level of prices of industrial electric motors and dynamos. The present price level was established in March, 1947, and, despite additional costs incurred since

LONDON TRANSPORT EXECUTIVE. Applications are invited for posts in the Department of the Chief Mechanical Engineer (Railways) for Electrical and Mechanical Engineering work in the running, technical, and shops divisions. Applicants should be qualified engineers with practical experience in railway, heavy or medium engineering, and not over 30 years of age. Commencing salary up to £470 p.a., dependent on experience, age and qualifications. The successful candidates will be required to pass a medical examination. Applications giving full details of qualifications, experience and age, should be sent to the STAFF OFFICER (F/E.V.S.), LONDON TRANSPORT EXECUTIVE, 55, Broadway, Westminster, S.W.1, so as to be received not later than July 24, 1948. Canvassing either directly or indirectly will disqualify a candidate.

**MECHANICAL APPLIANCES FOR HANDLING RAILWAY TRAFFIC.** By G. Bulkeley. An explanation of the employment of mechanical apparatus for handling and carrying general goods. Cloth. 7½ in. by 5 in. 132 pp. Illustrated. 5s. By post 5s. 3d.

then, the prices have remained at that level and will continue to do so as long as the costs of labour, materials, and services remain as at present.

**British Aluminium Branch Office.**—The Manchester branch office (North Western Area) of the British Aluminium Co. Ltd. has been moved from Chancery Chambers, 55, Brown Street, Manchester, 2, to 46, Fountain Street, Manchester, 2. The telephone number, Deansgate 3639, remains the same, the telegraphic address being Britalumin, Manchester.

**Chloride Electrical Storage Co. Ltd.**—A profit of £255,071 was shown for the nine months to December 31 last, this figure including one year's results for the subsidiary companies. It compares with £297,646 for the year to March 31, 1947. Although the allocation of £100,000 to general reserve is the same, the amount set aside for employees of subsidiary companies has been increased from £23,000 to £25,000.

**Railway Students' Association.**—An exhibition of railway films preceded the annual general meeting of the Railway Students' Association at the London School of Economics, on May 26. The first film, "Peep Behind the Scenes," is an apt record of the wartime activities of the Southern Railway works, which ranged from landing-craft construction to building the tail units for Horsa gliders. Most impressive photography characterised the Swedish film which, with effective filming of the cascades of snow hurled skywards by the rotary snowplough, demonstrated its application on Swedish railways.

**Western Region Locomotive in Blue Livery.**—A "King" Class locomotive of the Western Region, No. 6009, *King Charles II*, has been painted in the blue livery chosen experimentally by the Railway Executive for the most powerful express passenger types. The cab and tender sides are lined with a broad grey band edged with cream, and a separate red line. Double lines of red are used for the boiler and cylinder lining. The frames are lined with narrow bands of red, cream, and grey. The familiar G.W.R. copper chimney band, brass safety valve casing, and brass splashers beading are retained. Although the number of the locomotive is unchanged under the British Railways re-numbering scheme, there is evidence of the new system in the attachment of a number plate to the smokebox door—a departure from G.W.R. practice—and the tender is lettered "British Railways." The loco-

tive will haul the trains of specially painted rolling stock, to test public reactions to the proposed liveries for various classes of traffic, to which reference was made in our May 28 issue.

**Nitrate Railways Limited.**—Railway operations in 1947 incurred a loss of £76,583, compared with £57,748 in the preceding year. Dividends, interest, etc., took £68,935 and the net deficit for the year was £7,648. In 1946 a surplus of £7,191 was shown. The company again declares a dividend of 1½ per cent. on the ordinary and preferred converted ordinary shares, which will require £36,225. In consequence, the carry-forward has been reduced from £119,506 to £75,632.

**Staff Shortage Postpones L.M.R. Restaurant Services.**—The London Midland Region announces with regret that owing to unforeseen difficulties which arose in obtaining staff, it will not be possible until further notice to provide the advertised restaurant cars on the following trains (weekdays only), May 31: 2 p.m., Manchester Victoria to Glasgow Central; and 4.10 p.m., Glasgow Central to Manchester Victoria. The restaurant cars will be put on with the least possible delay. A restaurant car on the 2 p.m. from Manchester Victoria had been planned as an additional facility beginning with the summer timetable, and it is in the Manchester area that the difficulty in obtaining staff has occurred.

**Extension of Western Region Zonal Scheme.**—Carmarthen, Narberth, Pembroke Dock and Tenby were brought into operation on June 1 as sub-railheads in the Western Region zonal scheme (introduced by the G.W.R. and described in our October 24 and 31, 1947, issues). Details of the complete zones in which the four new sub-railheads now operate are as follows:—

Railhead	Sub-Railhead	No. of stations formerly handling traffic
Haverfordwest ...	Cardigan Fishguard Milford Haven Narberth Pembroke Dock	28
Llanelli ...	Tenby Ammanford Carmarthen Llandysul	34

The Haverfordwest zone covers 700 square miles and the Llanelli zone 650 square miles.

**Registrations of Road Vehicles.**—A return issued by the Ministry of Transport shows the number of mechanically-propelled road vehicles in Great Britain registered for the first time under the Roads Act, 1920, during the month of March, 1948, with comparative figures for March, 1947, to be as follows:—

	March, 1948	March, 1947
All types of:—		
Cycles ...	4,779	6,182
Hackney vehicles (other than tramcars) ...	1,432	662
Agricultural engines, etc. ...	5,250	3,045
Tractors ...	80	138
Goods vehicles ...	9,494	9,284
Cars, etc. ...	8,687	11,103
Exempt vehicles ...	1,326	1,143
	31,048	31,557

The "exempt" class comprises vehicles registered under the Roads Act, 1920, but on which no duty is paid, whether or not a form of licence is required. Certain vehicles operated by the Forces of the Crown and allied powers which are not so registered are not included.

## Railway Stock Market

With the unexpected result of the South African election leading to sharp falls in Kaffirs and other South African securities, stock markets proceeded cautiously. The City does not expect the Malan Government will take South Africa out of the sterling area, but there are fears that in attempting to control the flow of capital into South Africa, some restriction on share dealings between London and the Cape may be proposed. It is realised, however, that it will be some while before the intentions of the new Government are indicated, and that meanwhile uncertainty must persist.

British Funds reflected the general tendency despite the success of the £10,000,000 Australian 3 per cent. conversion loan, which commanded a premium of ½. Transport and other nationalisation stocks fluctuated moderately and were lower on balance, business generally being on a smaller scale than in recent weeks. Industrials also lost a little ground, although news that the big Imperial Chemical issue is to be on a one for five basis created a favourable impression as this will raise the capital by £10,000,000, or less than half the recent market estimate. There are considered on this basis to be reasonable prospects of the 10 per cent. dividend being maintained in future.

There was a good deal less business in foreign railway stocks, Brazil rails still being subdued now that there is no early prospect of take-over developments. Great Western of Brazil, however, have rallied strongly to 78s. 9d. in response to revived take-over talk. Leopoldina was uncertain at 12, with the preference 42, the debentures 74, and Leopoldina Terminal debentures 68. San Paulo remained active around 190, helped by the prevailing market view that the company will receive the pay-out money before long and that the full break-up value of the stock is at

least £200. Antofagasta was rather more active around 13½, with the preference stock 68½.

Canadian Pacific remained prominent, changing hands over 25½, with the preference stock 84½ and debentures 114. Elsewhere, however, Beira Rail bearer shares eased to 56s. 3d., but remained active. United of Havana 1906 debentures changed hands around 17½, awaiting more news from Havana. Taital £5 shares have marked 20s., and, in other directions, Manila "A" debentures were 96 and the preference shares 10s. 6d. Nitrate Rails, after rising to 90s., came back to 86s. 3d. on the financial results.

Road transport shares remained a firm feature, those of the operating companies generally holding recent gains. Iron and steel shares eased with the general trend of markets although little selling was in evidence, as it is realised that in most cases yields are attractive and prospects of dividends being maintained are considered to be good.

Vulcan Foundry changed hands around 28s. and North British Locomotive at 25s. 6d. Beyer Peacock have been active around 24s. 3d. following publication of the full results. In regard to the raising of the distribution from 5 per cent. to 6 per cent., the Chairman points out that this was decided on in view of the undoubted claims of shareholders, and that steps have been taken to ascertain that the proposal is within the proviso of exceptional cases outlined in the F.B.I. dividend limitation request. In other directions, Wagon Repairs 5s. shares have eased to 20s. 9d. and business up to £7½ was recorded in Charles Roberts shares.

Oil shares were upset by the decision of the V.O.C. to keep the dividend at 3s. 3d. per share despite the higher interim payment and the very big increase in profits. This suggests the big oil companies consider they are not outside the dividend limitation request. Following the dividend decision, V.O.C. fell £1 to £5, but later showed a moderate recovery.

## Traffic Table of Overseas and Foreign Railways

	Railways	Miles open	Week ended	Traffics for week		No. of week	Aggregate traffics to date		
				Total this year	Inc. or dec. compared with 1945/46		Total	Increase or decrease	
							1947/8		
South & Central America	Antofagasta ...	834	23.5.48	£ 47,920	+ £ 3,400	21	£ 1,075,970	+ £ 262,760	
	Bolivar ...	174	Apr., 1948	880,579	- 828,757	17	8,374,821	- 874,827	
	Brazil ...	...	...	...	...	...	...	...	
	Cent. Uruguay ...	970	22.5.48	45,838	+ 35,068	47	1,709,252	- 21,013	
	Costa Rica ...	262	Apr., 1948	18,379	- 15,486	43	310,730	- 23,965	
	Dorada ...	70	Mar., 1948	19,700	- 9,500	13	59,500	- 30,000	
	G.W. of Brazil ...	1,030	22.5.48	29,800	+ 7,700	21	754,600	- 28,400	
	Inter. Ctl. Amer. ...	794	Apr., 1948	81,218,460	+ 859,490	17	84,812,683	+ 862,337	
	La Guaira ...	22½	Apr., 1948	8115,893	+ 813,925	18	8,407,532	- 849,511	
	Leopoldina ...	1,918	8.5.48	44,971	- 16,006	19	1,005,427	- 190,564	
	Midland Uruguay ...	319	Apr., 1948	19,608	+ 1,694	43	183,648	+ 14,845	
	Nitrate ...	382	15.5.48	11,779	+ 2,023	20	111,140	+ 30,955	
	N.W. of Uruguay ...	113	Apr., 1948	5,948	+ 362	43	54,934	- 985	
	Paraguay Cent. ...	274	21.5.48	70,095	+ 62,041	47	63,090,707	+ 6134,397	
	Peru Corp. ...	1,059	Apr., 1948	199,283	+ 37,682	39	1,726,563	+ 208,348	
Canada	Salvador ...	100	Mar., 1948	c240,000	+ c31,000	39	c1,621,600	+ c283,600	
	San Paulo ...	153½	...	...	...	...	...	...	
	Taital ...	156	Apr., 1948	9,670	+ 6,285	44	80,080	+ 39,065	
	United of Havana ...	1,301	22.5.48	88,690	- 18,603	47	3,594,814	+ 362,550	
	Uruguay Northern ...	73	Apr., 1948	1,569	+ 136	43	12,164	- 596	
	Canadian National ...	23,535	Apr., 1948	10,235,250	+ 1,230,500	18	36,902,750	+ 2,829,000	
	Canadian Pacific ...	17,037	Apr., 1948	6,880,000	+ 318,250	18	26,269,500	+ 1,870,750	
	Various	Barsi Light† ...	202	Apr., 1948	30,727	+ 1,432	4	30,727	+ 1,432
		Beira ...	204	Mar., 1948	130,824	+ 33,115	26	711,144	+ 167,195
		Egyptian Delta ...	607	31.3.48	20,147	+ 1,782	52	628,438	+ 44,064
		Gold Coast ...	536	Mar., 1948	209,795	+ 15,052	52	2,015,891	- 193,445
		Manila ...	...	...	...	...	...	...	...
		Mid. of W. Australia ...	277	Mar., 1948	25,090	+ 5,591	39	209,473	+ 54,153
		Nigeria ...	1,900	Mar., 1948	401,873	+ 40,277	52	4,581,601*	+ 49,128
		Rhodesia ...	2,445	Sept., 1947	643,980	+ 102,833	52	6,787,603	+ 612,938
South African ...		13,323	1.5.48	1,335,944	+ 22,084	5	5,870,593	+ 439,131	
Victoria ...		4,774	Feb., 1948	1,421,349	+ 234,015	35	—	—	

\* Receipts are calculated @ 1s. 6d. to the rupee

\* Aggregate figures to March 20